

THE TERMITES OF KARTABO*¹
BARTICA DISTRICT, BRITISH GUIANA

BY ALFRED EDWARDS EMERSON

University of Pittsburgh

(Figs. 24-94 incl.)

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INTRODUCTION

The material upon which the following report is based was largely collected by the author during three successive trips to British Guiana, the first from March to October 1919, the second from May to December 1920 and the third from February to September 1924. Practically the entire time was spent at the Tropical Research Station of the New York Zoological Society at Kartabo, British Guiana, sixty miles from the coast in the midst of the luxuriant tropical rain forest. I made the attempt to survey the termite life in the immediate neighborhood of the Research Station thoroughly, but so many new problems greeted me at every turn that I only partially succeeded. I do believe, however, that the majority of the species of termites in the vicinity were collected, so that the

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¹ Contribution, Department of Tropical Research No. 193.

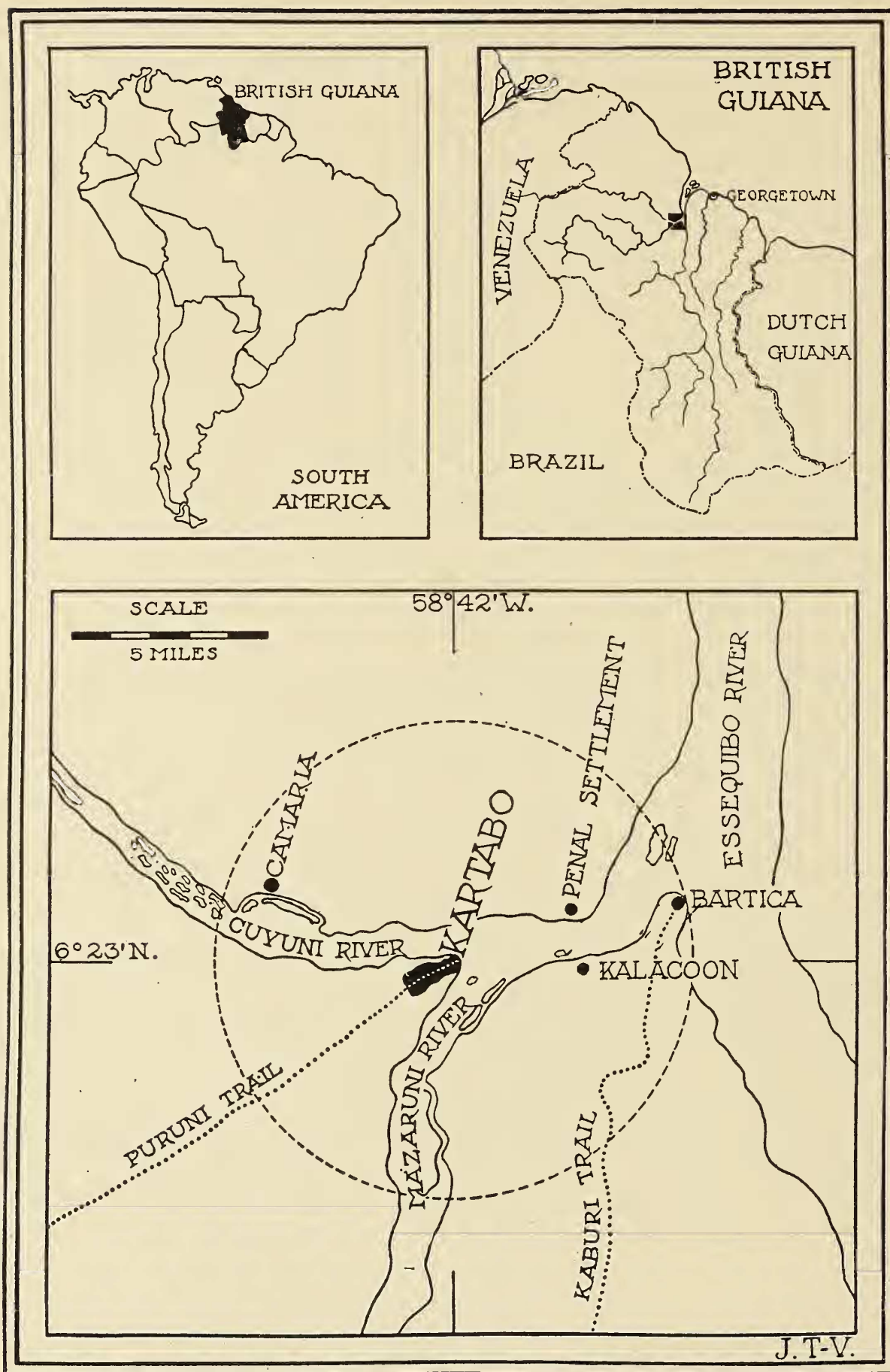


Plate A. British Guiana Tropical Research Station of the New York Zoological Society.
Circle represents a radius of six miles.

systematic report should be fairly complete for the locality. I imagine that the more arid savannah regions of British Guiana will prove in time to possess a somewhat different fauna.

My work was primarily of an ecological and biological nature, but the need for a thorough systematic account of the species was imperative. Preceding this report, numerous papers have appeared on the life of the termites and their guests with systematic and morphological accounts of the termitophiles which proved to be abundant in the nests of certain genera. [Brues (1923), Chamberlin (1923), Folsom (1923), Mann (1923), McIndoo (1923), Morrison (1923), Silvestri (1923).] Other papers are in preparation.

The material collected at Kartabo has been supplemented by valuable collections made in British Guiana by Dr. F. M. Gaige of the Museum of Zoology at Ann Arbor, Mr. G. E. Bodkin and Mr. L. D. Cleare, Jr. of the Department of Agriculture of British Guiana, Mr. William Beebe, the director of the Tropical Research Station of the New York Zoological Society, Mr. John Tee-Van of the staff of the Tropical Research Station and Dr. William M. Wheeler and Dr. I. W. Bailey of Bussey Institution. I have also included records of a number of British Guiana species which I collected in the West Indian Islands on trips to and from British Guiana.

For continued helpful criticism and suggestions during the time spent in the field I am greatly indebted to Mr. Beebe, to whom I owe the opportunity for this study and to Prof. Wheeler, who was a constant source of inspiration during the few months in which he studied ants at Kartabo.

I am also indebted to Prof. J. C. Bradley and Prof. O. A. Johannsen of Cornell University and to Dr. T. E. Snyder of the U. S. Bureau of Entomology for criticism of the manuscript. Both in the field and in the preparation of the manuscript I was greatly helped by my wife, Winifred Jelliffe Emerson.

In the course of my studies I have examined the collections of termites at the Museum of Comparative Zoology, the American Museum of Natural History and the United States National Museum.

The collection of type specimens is deposited with the New York Zoological Society. Duplicate specimens and paratypes are deposited with the American Museum of Natural History, New York City, U. S. National Museum, Washington, and with the ento-

mological collection of Cornell University.

HISTORICAL SUMMARY.

The first termites to be reported from British Guiana were *Termes decumanus* (= *Syntermes grandis*) and *Termes morio* (= *Coptotermes testaceus*) by Erichson (1848) in Schomburk's "Reisen in Britisch-Guiana." Walker (1853) reported *Syntermes grandis* and *Syntermes dirus*. Hagen (1858) included *Coptotermes testaceus* and *Anoplotermes cingulatus* in the fauna. No collection of any importance was reported upon from British Guiana until Banks (1918) identified a collection made by F. E. Lutz which included eight species determined by Banks as *Leucotermes tenuis*, *Rhinotermes marginalis*, *Cornitermes acignathus*, *Nasutitermes ephratae*, *Nasutitermes guayanae*, *Nasutitermes holmgreni*, *Nasutitermes octopilis*, and *Capritermes cingulatus*. Recently Silvestri (1923) has described four more species, *Syntermes parallelus*, *Capritermes bodkini*, *Hamitermes excellens*, and *Eutermes parvellus*, making sixteen species in all reported from this locality. My collections include all except three of these species. Two (*Coptotermes testaceus* and *Anoplotermes cingulatus*) have been so inadequately described that their determination is practically impossible. *Syntermes grandis*, however, is a well described form and occurs within the borders of British Guiana, although I did not collect it. The British Guiana forms referred to *Syntermes dirus* probably belong to *S. snyderi*. All of the rest formerly reported from British Guiana are described in this report with the following changes in the names:—*Cornitermes acignathus* as reported by Banks is identical with *Cornitermes pugnax*, sp. nov.; the name of *Nasutitermes holmgreni* has been changed to *Nasutitermes banksi*; specimens determined by Banks as *Capritermes cingulatus* are probably the same as *Capritermes angusticeps*, sp. nov.; *Hamitermes excellens* is referred to as *Amitermes excellens* and *Eutermes parvellus* is referred to as *Nasutitermes* (*Subulitermes*) *parvellus*.

My collections add 15 formerly described species to the fauna and 51 species in the collections seem to be new to science, making in all a total of 81 species reported from British Guiana.

COMPARATIVE STATISTICS ON TERMITES

Number of known families	4
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Number of families found in British Guiana.....	3
Number of known genera and subgenera.....	118
Number of known neotropical genera and subgenera.....	41
Number of known British Guiana genera and subgenera..	30
Number of described species of the World.....	1094
Number of described species from the New World.....	292
Number of described Neotropical species.....	263
Number of described British Guiana species.....	81

STATISTICAL SUMMARY OF THIS REPORT

Number of species described from British Guiana.....	78
Number of species found at Kartabo.....	74
Number of species found in Bartica District.....	76
Number of species in this report formerly described.....	27
Number of species in this report new to science.....	51
Number of subgenera in this report new to science.....	3
Number of species in this report formerly known from only one caste, or castes described separately.....	16
Number of formerly known species to which a caste has been added or separately described castes connected..	14
Number of species in this report for which the imago and soldier if it exists are known (<i>Anoplotermes</i> included)..	66
Number of species in this report for which only the imago or soldier is known (excluding <i>Anoplotermes</i>).....	12

LOCALITIES MENTIONED

Approximate Position

Amatuk, B. G.	59° 18' W., 5° 18' N.
Antigua, W. I.	61° 40'–61° 50' W., 17°–17° 10' N.
Arepo Savanna,	Trinidad.
Asuncion,	Paraguay. 57° 30' W., 25° 25' S.
Barakara, B. G.	58° 41' W., 6° 23' N.
Bartica, B. G.	58° 38' W., 6° 24' N.
Camaria, B. G.	58° 48' W., 6° 25' N.
Canister Falls,	B. G. 58° 30' W., 4° 54' N.
Carabaya Mts.,	Peru. 70° W., 14° S.
Castries,	St. Lucia, W. I. 61° W., 14° N.
Chaquimayo,	Peru. Near 71° W., 14° S.

- Cow Island, B. G. $58^{\circ} 38' \text{ W.}, 6^{\circ} 25' \text{ N.}$
Coxipo (Cuyaba), Brazil. $56^{\circ} \text{ W.}, 15^{\circ} 30' \text{ S.}$
Cuyuni River. $58^{\circ} 41' - 61^{\circ} 45' \text{ W.}, 5^{\circ} 45' - 7^{\circ} \text{ N.}$
Dominica, W. I. $61^{\circ} 10' - 61^{\circ} 30' \text{ W.}, 15^{\circ} 10' - 15^{\circ} 40' \text{ N.}$
Dunoon, B. G. $58^{\circ} 18' \text{ W.}, 6^{\circ} 25' \text{ N.}$
Ephrata, Surinam. $54^{\circ} 40' \text{ W.}, 10^{\circ} \text{ N.}$
Fort de France, Martinique, W. I. $61^{\circ} 5' \text{ W.}, 14^{\circ} 40' \text{ N.}$
Georgetown, B. G. $58^{\circ} 10' \text{ W.}, 6^{\circ} 50' \text{ N.}$
Grenada, W. I. $61^{\circ} 34' - 61^{\circ} 50' \text{ W.}, 12^{\circ} - 12^{\circ} 16' \text{ N.}$
Issororo River, B. G. $58^{\circ} 53' - 59^{\circ} 8' \text{ W.}, 7^{\circ} 10' - 7^{\circ} 16' \text{ N.}$
Kaïeteur Falls, B. G. $59^{\circ} 27' \text{ W.}, 5^{\circ} 11' \text{ N.}$
Kartabo, B. G. $58^{\circ} 42' \text{ W.}, 6^{\circ} 23' \text{ N.}$
Martinique, W. I. $60^{\circ} 50' - 61^{\circ} 12' \text{ W.}, 14^{\circ} 25' - 14^{\circ} 55' \text{ N.}$
Mazaruni River, B. G. $58^{\circ} 38' - 60^{\circ} 42' \text{ W.}, 5^{\circ} 31' - 6^{\circ} 26' \text{ N.}$
Mojos (Prov. Caupolican), Bolivia. $69^{\circ} 10' \text{ W.}, 13^{\circ} 45' \text{ S.}$
Montserrat, W. I. $62^{\circ} 20' \text{ W.}, 16^{\circ} 40' \text{ N.}$
Onderneeming, B. G. $58^{\circ} 28' \text{ W.}, 7^{\circ} 5' \text{ N.}$
Penal Settlement, B. G. $58^{\circ} 40' \text{ W.}, 6^{\circ} 24' \text{ N.}$
Port of Spain, Trinidad. $61^{\circ} 25' \text{ W.}, 10^{\circ} 42' \text{ N.}$
Potaro Landing, B. G. $59^{\circ} 9' \text{ W.}, 5^{\circ} 23' \text{ N.}$
Potaro River, B. G. $58^{\circ} 52' - 59^{\circ} 53' \text{ W.}, 4^{\circ} 58' - 5^{\circ} 25' \text{ N.}$
St. Croix, W. I. $64^{\circ} 35' - 65^{\circ} \text{ W.}, 17^{\circ} 40' - 17^{\circ} 45' \text{ N.}$
St. Jose de Marabitanas, Brazil. $66^{\circ} 40' \text{ W.}, 0^{\circ} 55' \text{ N.}$
St. Joseph, Trinidad. $61^{\circ} 23' \text{ W.}, 10^{\circ} 40' \text{ N.}$
St. Kitts, W. I. $62^{\circ} 35' - 62^{\circ} 50' \text{ W.}, 17^{\circ} 10' - 17^{\circ} 25' \text{ N.}$
St. Lucia, W. I. $60^{\circ} 50' - 61^{\circ} 5' \text{ W.}, 13^{\circ} 45' - 14^{\circ} 5' \text{ N.}$
St. Thomas, W. I. $64^{\circ} 50' - 65^{\circ} \text{ W.}, 18^{\circ} 20' - 18^{\circ} 25' \text{ N.}$
Sanchez, Dominican Republic. $69^{\circ} 40' \text{ W.}, 19^{\circ} 20' \text{ N.}$
Santarem, Brazil. $54^{\circ} 20' \text{ W.}, 2^{\circ} 30' \text{ S.}$
Santiago, Dominican Republic. $70^{\circ} 40' \text{ W.}, 19^{\circ} 30' \text{ N.}$
Taboga Island, Panama. $79^{\circ} 25' \text{ W.}, 8^{\circ} 55' \text{ N.}$
Tuiche River (Prov. Caupolican), Bolivia. $67^{\circ} 25' - 68^{\circ} 40' \text{ W.},$
 $13^{\circ} 20' - 15^{\circ} \text{ S.}$
Tukeit, B. G. $59^{\circ} 25' \text{ W.}, 5^{\circ} 13' \text{ N.}$
Tumatumari, B. G. $59^{\circ} 25' \text{ W.}, 5^{\circ} 22' \text{ N.}$
Union, St. Lucia, W. I. Near Castries.
Wenamu River. $61^{\circ} 8' - 61^{\circ} 21' \text{ W.}, 5^{\circ} 57' - 6^{\circ} 42' \text{ N.}$

DISTRIBUTION

A number of genera of termites are found in all the warmer parts of the world showing a rather ancient history which, when studied carefully may give some interesting clues to the larger problems of distribution. The groups which have been reported from the Australian, Oriental, Ethiopian and Neotropical Regions are *Kaloterme*s, s. str., *Neoterme*s, *Cryptoterme*s, *Glyptoterme*s, *Pro-rhinoterme*s, *Coptoterme*s, *Nasutiterme*s, s. str., *Subuliterme*s, *Ami-terme*s, s. str., *Mirotérme*s, s. str., and *Microceroterme*s.

The faunas of Africa, Madagascar and the Oriental Region are more closely related than any of these regions are to South America. The South American termite fauna is more closely related to the Ethiopian and Oriental than to the Australian Region.

Following is a list of the groups which so far have been reported only from the New World:

*Rugiterme*s, *Eucryptoterme*s, *Rhinoterme*s, s. str., *Serriterme*s, *Synterme*s, *Corniterme*s, s. str., *Armiterme*s, *Convexitérme*s, *Diversi-terme*s, *Velociterme*s, *Constrictoterme*s, *Angulariterme*s, *Cylindro-terme*s, *Crepiditerme*s, *Caviterme*s, *Spiniterme*s, and *Orthognathoterme*s.

Many of these groups are small, but the larger ones are significant in their distribution.

In working over the collections of British Guiana termites I have been impressed with certain obvious relationships to the surrounding regions. The island of Trinidad possesses many species identical with those found in British Guiana and the West Indies show a number of species which correspond to British Guiana species. The fauna of Panama, however, seems to be quite different, the only species that are common to the two regions being those of wide distribution such as *Coptoterme marabitanas* and *Leucoterme tenuis*. Many of the forms described from Peru and Bolivia by Holmgren are very close to the British Guiana forms, but often differ by specific or subspecific characters which are very slight. The fauna from southern South America described by Silvestri (1903), however, seems to be much more distinct from that of British Guiana than is the Peruvian and Bolivian fauna. A study of the Amazon basin should give us many connecting links between British Guiana and western and southern South America but unfortunately little is yet known concerning the termites of this region.

CLASSIFICATION

After having nearly completed the manuscript of this report, I received two papers by S. F. Light (1921 & 1921a) which admirably set forth many of my own views on termite classification. It is a great pleasure to find another new student of this group who has independently arrived at the same conclusions with regard to many rather complicated systematic problems.

In general I have followed Holmgren's classification (1911 & 1912) as it is certainly the best yet introduced for the termites of the world. However, as Light and Banks have pointed out, certain of Holmgren's names are not based upon the generally accepted rules of nomenclature and I prefer to follow Light in the family names. I have followed Banks (Banks & Snyder, 1920) in retaining the old spelling of *Kaloterme*s and have also used the name *Nasutitermes* for the old genus *Eutermes* Fritz Müller, retaining *Microcerotermes*, however, as explained in the pages following.

I am also of the opinion that *Prorhinotermes* should replace *Arrhinotermes* as used by Holmgren and that *Termes* should replace *Odontotermes* as used by Holmgren, as Banks has already suggested. *Termes fatalis* Linnaeus, although probably impossible to determine as a modern species, seems to belong to Holmgren's *Odontotermes* with some doubt, as he himself has pointed out (1912). If *T. fatalis* Linn. cannot be considered the type, then *T. capensis* is type, according to Holmgren, 1912 and Fuller, 1921, p. 17. Holmgren's subgenus *Macrotermes* has been made to include the entire genus *Termes* of Holmgren. This leaves Holmgren's subgenus *Termes* without a name and I propose a new name *Bellicositermes* for this subgenus with *Macrotermes (Bellicositermes) bellicosus* Smeathman as the type species.

Light has thought it best to raise many of Holmgren's subgeneric groups to generic rank. Silvestri (1914) and Banks (Banks & Snyder, 1920) have also largely dropped the use of subgeneric names. I agree heartily with these authors that the use of subgeneric names is cumbersome, but feel that many of Holmgren's subgenera need further study before raising them all to generic rank and I do not believe that a few should be raised to generic rank without publishing a list of world species and genera. Arbitrarily raising all of Holmgren's subgenera to genera would certainly cause confusion, especially in such groups as *Nasutitermes*, where many of the sub-

genera are not yet fully established. I have therefore retained most of Holmgren's generic and subgeneric names with the belief that at present such a procedure will cause less confusion.

New Specific and Subgeneric Names

(Proposed for formerly described species and subgenera)

Bellicositermes to take the place of *Termes*, s. str. as used by Holmgren (1912).

Type species: *Macrotermes* (*Bellicositermes*) *bellicosus* (Smeathman).

Nasutitermes (*N.*) *banksi*, new name for *Nasutitermes holmgreni* Banks.

Nasutitermes (*Subulitermes*) *thompsonae*, new name for *Eutermes incola* Holmgren.

Anoplotermes (*A.*) *meridianus*, new name for *Anoplotermes morio* (Latr.) Silvestri.

The reasons for these changes will be found elsewhere in the paper.

MEASUREMENTS AND TERMS

Following Light's suggestion, I believe that an explanation of some of the terms used in describing the forms in this report which might be misinterpreted may save confusion.

Bristles.—Long, relatively stiff hairs found on head, thorax, and abdomen. I have usually used this term to contrast the longer hairs with the shorter hairs when they are found together. The term is thus comparative.

Cilia.—The short hairs often found on the margins of the wings.

Constriction.—A narrowed region running across the top and sides of the head. This term is used particularly in the description of the soldiers of *Nasutitermes*.

Costal margin.—The thickened vein-like margin found on nearly all termite wings.

Cubitus.—The large inner vein of the wing which, in termites, always has a number of parallel branches running to the inner margin.

Diameter of eye.—The widest part of the compound eye.

Eye.—Used to designate the compound eye.

Fontanelle.—The opening of the frontal gland. This term is also used for the fontanelle plate as defined by Light (1921a).

Frontal tube.—A short projection with the opening of the frontal gland at the end, usually found in *Syntermes* and *Cornitermes*. This structure is homologous with the nose of *Armitermes* and *Nasutitermes*.

Holotype.—I use this term to designate the single specimen upon which the species is based. It may be either the soldier or imago, usually depending upon which shows the most clean-cut specific characters.

Imago.—This term is used for any first form reproductive individual whether a king, queen, or winged specimen.

Length of anterior wing.—Taken from the suture to the tip.

Length of head.—In imago, used to measure from the back of the head to the tip of the labrum; in the soldier with mandibles, from the tip of the mandibles to the back of the head; in the soldier without mandibles, from the tip of the nose to the back of the head.

Length of head without mandibles.—Taken from the back of the head to the tip of the labrum.

Length of pronotum.—Always measured at the median line whether the margins are emarginate or not.

Major soldier.—The largest soldier form in those species with polymorphic soldiers.

Media.—The vein between the radius and cubitus.

Minor soldier.—The smallest soldier form in those species with polymorphic soldiers.

Morphotype.—A single specimen of the caste (usually a soldier or imago) which has not been designated as the Holotype. In every case the single specimen is from the same colony as the Holotype.

Muscle insertions:—A term used by Holmgren to indicate certain areas visible from the outside which usually form spots of a

lighter color in back of the postclypeus. Presumably muscles are attached to the chitin at these points.

Nose:—The projection in front of the head in the soldiers of certain genera.

Nymph:—I follow Comstock in calling all immature forms of termites nymphs.

Postclypeus or posterior clypeus.—The posterior sclerite of the clypeus. In termites the clypeus is usually divided into two parts, the anteclypeus in the imago usually being white and the postclypeus pigmented with or without a median longitudinal suture.

Radius.—The vein which runs close to the costal margin from the suture to the tip of the wing. In all except certain species of *Kaloterme*s it is unbranched and thickened.

Scale.—This term is used to designate that part of the wing behind the suture which remains on the sexual forms after the wings are shed.

Vertex.—The dorsal posterior portion of the head.

Width of head.—Taken at widest point. In the imago it always includes the eyes.

SPECIES RECORDED: BRITISH GUIANA

*Kaloterme*s (*Neoterme*s) *clearei*, sp. nov.

*Kaloterme*s (*Neoterme*s) *kartaboensis*, sp. nov.

*Kaloterme*s (*Neoterme*s) *holmgreni* Banks

*Kaloterme*s (*Rugiterme*s) *bicolor*, sp. nov.

*Kaloterme*s (*Rugiterme*s) *flavicinctus*, sp. nov.

*Kaloterme*s (*Rugiterme*s) *magninotus*, sp. nov.

*Kaloterme*s (*Cryptoterme*s) *brevis* (Walker)

*Kaloterme*s (*Cryptoterme*s) *verruculosus*, sp. nov.

*Kaloterme*s (*Cryptoterme*s ?) *cubicocephus*, sp. nov.

*Kaloterme*s (*Glyptoterme*s) *pellucidus*, sp. nov.

*Kaloterme*s (*Glyptoterme*s) *perparvus*, sp. nov.

*Kaloterme*s (*Glyptoterme*s) *guianensis*, sp. nov.

*Kaloterme*s (*Glyptoterme*s) *hospitalis*, sp. nov.

*Kaloterme*s (*Lobiterme*s) *nigriceps*, sp. nov.

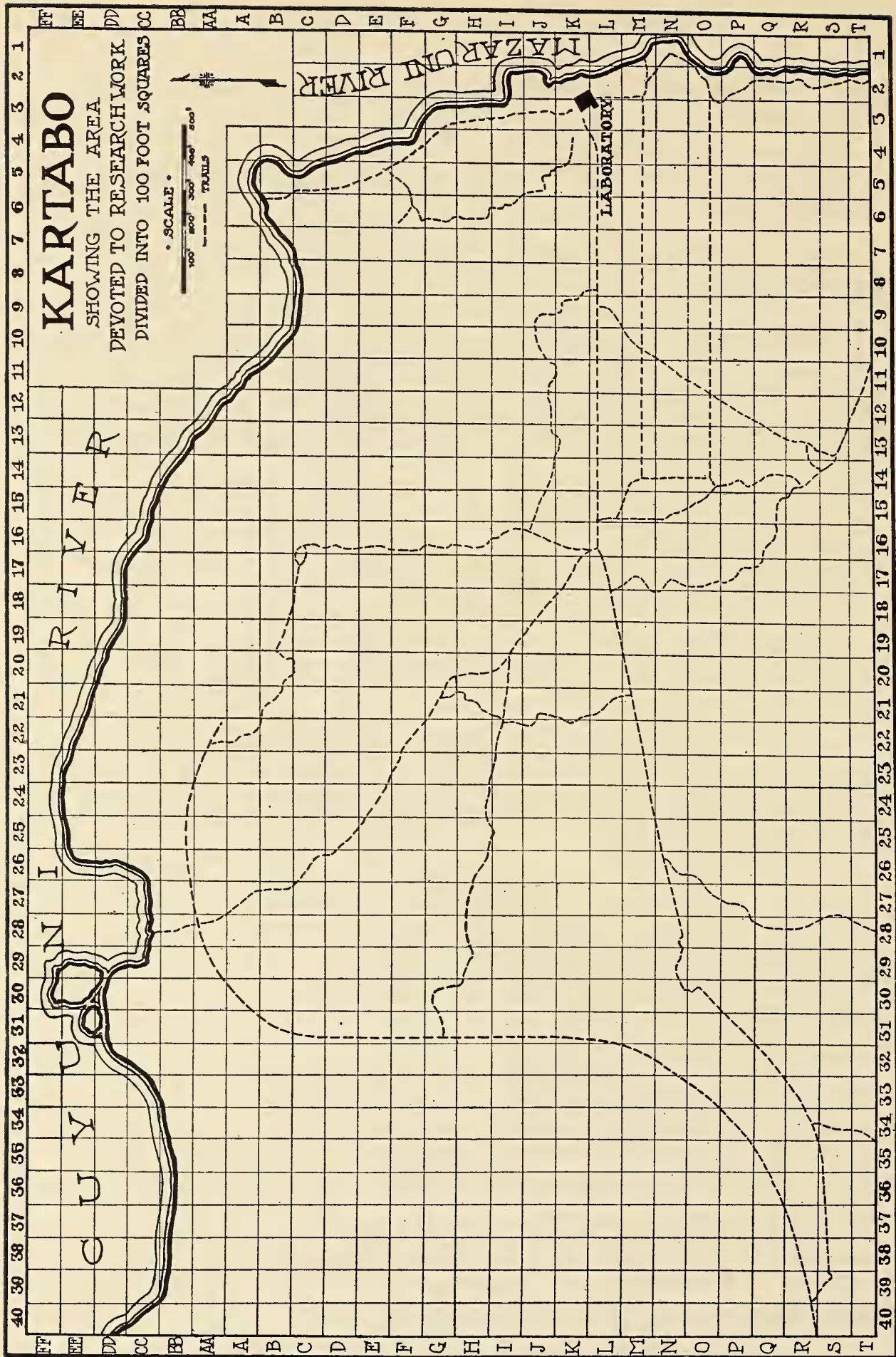


Plate B. Area devoted to research at Kartabo.

Drawing by John Tee-Van.

Leucotermes tenuis (Hagen)

Leucotermes crinitus, sp. nov.

Coptotermes marabitanas (Hagen)

**Coptotermes testaceus* (Linn.) (doubtful species)

Rhinotermes (*Rhinotermes*) *nasutus* (Perty)

Rhinotermes (*Rhinotermes*) *marginalis* (Linn.)

Rhinotermes (**Rhinotermes**) *hispidus*, sp. nov.

Rhinotermes (**Rhinotermes**) *longilabius*, sp. nov.

Rhinotermes (**Rhinotermes**) *tenebrosus*, sp. nov.

Rhinotermes (**Rhinotermes**) *subfusciceps*, sp. nov.

Syntermes snyderi, sp. nov.

Syntermes territus, sp. nov.

**Syntermes grandis* (Rambur)

Syntermes parallelus Silvestri

Cornitermes (*Labiotermes*) *labralis* Holmgren

Cornitermes (**Cornitermes**) *pugnax*, sp. nov.

Armitermes (*Armitermes*) *albidus* (Hagen)

Armitermes (**Armitermes**) *percutiens*, sp. nov.

Armitermes (**Armitermes**) *teevani*, sp. nov.

Armitermes (**Armitermes**) *grandidens*, sp. nov.

Armitermes (**Armitermes**) *minutus*, sp. nov.

Nasutitermes (*Nasutitermes*) *guayanae* (Holmgren)

Nasutitermes (*Nasutitermes*) *costalis* (Holmgren)

Nasutitermes (*Nasutitermes*) *ephratae* (Holmgren)

Nasutitermes (*Nasutitermes*) *octopilis* Banks

Nasutitermes (*Nasutitermes*) *surinamensis* (Holmgren)

Nasutitermes (*Nasutitermes*) *acajutlae* (Holmgren)

Nasutitermes (*Nasutitermes*) *intermedius* Banks

Nasutitermes (**Nasutitermes**) *comstockae*, sp. nov.

Nasutitermes (**Nasutitermes**) *wheeleri*, sp. nov.

Nasutitermes (*Nasutitermes*) *banksi*, new name

Nasutitermes (**Nasutitermes**) *gaugei*, sp. nov.

Nasutitermes (**Nasutitermes**) *brevipilus*, sp. nov.

Nasutitermes (**Subulitermes**) *baileyi*, sp. nov.

Nasutitermes (*Subulitermes*) *parvulus* (Silvestri)

Nasutitermes (**Subulitermes**) *oculatissimus*, sp. nov.

Nasutitermes (**Subulitermes**) *raripilus*, sp. nov.

Nasutitermes (**Subulitermes**) *osborni*, sp. nov.

Nasutitermes (**Subulitermes**) *snyderi*, sp. nov.

Nasutitermes (*Convexitermes*) *nigricornis* (Holmgren)

- Nasutitermes** (**Convexitermes**) **kartaboensis**, sp. nov.
Nasutitermes (**Convexitermes**) **mazaruniensis**, sp. nov.
Nasutitermes (**Convexitermes**) **manni**, sp. nov.
Nasutitermes (**Velocitermes**) **beebei**, sp. nov.
Nasutitermes (*Constrictotermes*) *cavifrons* (Holmgren)
Nasutitermes (**Angularitermes**) **nasutissimus**, sp. nov.
Anoplotermes (**Anoplotermes**) **silvestrii**, sp. nov.
Anoplotermes (**Anoplotermes**) **banksi**, sp. nov.
Anoplotermes (**Anoplotermes**) **brevipilus**, sp. nov.
Anoplotermes (**Anoplotermes**) **subterraneus**, sp. nov.
Anoplotermes (**Anoplotermes**) **nigripunctatus**, sp. nov.
 **Anoplotermes* (*Anoplotermes*) *cingulatus* (Burmeister) (doubtful species)
Anoplotermes (**Speculitermes**) **arboreus**, sp. nov.
Cylindrotermes nordenskiöldi Holmgren
Amitermes (*Amitermes*) *excellens* Silvestri
Mirotermes (**Crepititermes**) **verruculosus**, sp. nov.
Mirotermes (*Mirotermes*) *nigritus* (Silvestri)
Mirotermes (*Mirotermes*) *hispaniolae* Banks
Mirotermes (**Mirotermes**) **acutinasus**, sp. nov.
Mirotermes (**Mirotermes**) **inquilinus**, sp. nov.
Mirotermes (**Cavitermes**) **tuberosus**, sp. nov.
Mirotermes (*Spinitermes*) *trispinosus* (Bates)
Capritermes (*Neocapritermes*) *bodkini* Silvestri
Capritermes (**Neocapritermes**) **angusticeps**, sp. nov.
Capritermes (**Neocapritermes**) **planiceps**, sp. nov.
Orthognathotermes macrocephalus (Holmgren)
Microcerotermes arboreus, sp. nov.

Species marked with an (*) are not described in this report.

USE OF KEY: BRITISH GUIANA TERMITES

The following key to the species of termites found in British Guiana is made for ease in determination. Where systematic arrangement could be followed without sacrificing simplicity, I have done so.

Explanation.—If the student has procured both the imago (king, queen or winged adult) and the soldier, he will find it easier to determine the species by starting at 2.

If he has only soldiers before him he should start at 70. In

this case the key often will refer to preceding numbers.

If he has only the imago and is reasonably certain that soldiers did not exist in the colony, he should start with 2. A single genus, *Anoplotermes*, lacks soldiers, the imago being told from related groups by the presence of deep narrow notches on the posterior margins of the meso- and metanota.

I have not included a key for the determination of the imagos alone, because they are very difficult to determine in this way, the keys usually being unsatisfactory even for the specialist in the group.

With this key and the descriptions and figures for help, even an inexperienced person should be able to determine the species so far reported from British Guiana.

Accuracy of measurement is absolutely necessary. The measurements used here were made with a micrometer disc in the eyepiece of the microscope.

KEY: BRITISH GUIANA TERMITES

1. Imago, soldier (when present), and worker procured.....2.
Only the soldier procured.....70.
2. Scale of forewing of imago much larger and usually overlapping
scale of hindwing.....3.
Scale of forewing of imago only slightly larger and never over-
lapping scale of hindwing.....18.
3. Clypeus of imago projecting, forming a conspicuous nose-like
structure.....4.
Clypeus of imago not projecting conspicuously.....8.
4. Head of minor soldier conspicuously constricted behind; anterior
margin of pronotum projecting forward; head darker than
rest of body. *Rhinotermes (R.) subfusciceps*, sp. nov. p. 356.
Head of minor soldier not conspicuously constricted behind.....5.
5. Labrum of major soldier wide.....6.
Labrum of major soldier narrow.....7.
6. Right mandible of major soldier with two teeth. *Rhinotermes*
(*R.*) *hispidus*, sp. nov. p. 350.
Right mandible of major soldier with one tooth. *Rhinotermes*
(*R.*) *marginalis* (L.) Hagen. p. 349.
7. Right mandible of major soldier with 2 large separated teeth.
Rhinotermes (R.) tenebrosus, sp. nov. p. 354.
Right mandible of major soldier with a large double-pointed tooth.
Rhinotermes (R.) longilabius, sp. nov. p. 351.
8. Head of soldier proportionately long, brownish or yellowish;
mandibles normal.....9.
Head of soldier proportionately short, partially or entirely black;
mandibles short.....16.

9. Mandibles of soldier without teeth except near base.....10.
Mandibles of soldier with conspicuous teeth along the inner margin.....12.
10. Soldier with large conspicuous opening to frontal gland at base of clypeus; head proportionately wide, narrowing toward front.
Coptotermes marabitanas (Hagen) p. 345.
Soldier without conspicuous opening to frontal gland; head proportionately long with sides nearly parallel.....11.
11. Head of soldier sparsely covered with hair; anterior angles of pronotum rounded. *Leucotermes tenuis* (Hagen) p. 341.
Head of soldier thickly covered with hair; anterior angles of pronotum sharp. *Leucotermes crinitus* sp. nov. p. 343.
12. Forehead of soldier deeply lobed and steep.....13.
Forehead of soldier not deeply lobed; front sloping at an angle of about 45°.....14.
13. Small species; width of head of soldier .76-.84 mm. *Kalotermes* (*Glyptotermes*) *perparvus*, sp. nov. p. 334.
Larger species; width of head of soldier 1.18-1.25 mm. *Kalotermes* (*Glyptotermes*) *guianensis*, sp. nov. p. 335.
14. Antennae of soldier with 11 or 12 segments, 3d segment shorter than 2d. *Kalotermes* (*Glyptotermes*) *hospitalis*, sp. nov. p. 336.
Antennae of soldier with 15-17 segments, 3d segment longer than 2d.....15.
15. Large species; width of head of soldier 2.71-2.76 mm. *Kalotermes* (*Neotermes*) *clearei*, sp. nov. p. 318.
Width of head of soldier 1.80-2.07 mm. *Kalotermes* (*Rugitermes*) *bicolor*, sp. nov. p. 322.
Width of head of soldier 1.38-1.48 mm. *Kalotermes* (*Rugitermes*) *magninotus*, sp. nov. p. 325.
Width of head of soldier 1.19-1.35 mm. *Kalotermes* (*Rugitermes*) *flavicinctus*, sp. nov. p. 324.
16. Forehead of soldier conspicuously tuberculate.....17.
Forehead of soldier not tuberculate. *Kalotermes* (*Lobitermes*) *nigriceps*, sp. nov. p. 338.
17. Top of head of soldier tuberculate for about $\frac{3}{4}$ its length; anterior margin of the pronotum concave. *Kalotermes* (*Cryptotermes*) *brevis* (Walker) p. 327.
Top of head of soldier tuberculate for nearly $\frac{1}{2}$ its length; anterior margin of pronotum emarginate. *Kalotermes* (*Cryptotermes*) *verruculosus*, sp. nov. p. 329.
Top of head of soldier not tuberculate; anterior margin of pronotum emarginate. *Kalotermes* (*Cryptotermes*?) *cubicoceps*, sp. nov. p. 331.
18. Colonies without soldiers; posterior margins of meso- and meta-nota narrowly and deeply emarginate.....19.
Colonies with soldiers.....23.
19. Width of head of imago 1.44-1.67 mm.; fontanelle much larger than ocelli, circular; 3d antennal segment equal to the 4th.....20.

- Width of head of imago 1.06–1.16 mm.; fontanelle darker than head; 3d antennal segment smaller than the 4th. *Anoplotermes* (A.) *nigripunctatus*, sp. nov. p. 427.
- Width of head of imago .73–.90 mm.; fontanelle lighter than head; 3d antennal segment smaller than 4th.....21.
20. Width of pronotum of imago about 1.61 mm.; workers with dark heads. *Anoplotermes* (*Speculitermes*) *arboreus*, sp. nov. p. 428.
- Width of pronotum of imago 1.33–1.40 mm.; workers with light heads. *Anoplotermes* (A.) *silvestrii*, sp. nov. p. 422.
21. Fontanelle of imago about as large as the ocelli, light and conspicuous; width of head .83–.87 mm. *Anoplotermes* (A.) *subterraneus*, sp. nov. p. 425.
- Fontanelle of imago small and inconspicuous.....22.
22. Length of hind tibia .63–.73 mm. *Anoplotermes* (A.) *brevipilus*, sp. nov. p. 424.
- Length of hind tibia .83–.97 mm. *Anoplotermes* (A.) *banksi*, sp. nov. p. 423.
23. Mandibles of soldier degenerate, not functional; front of head prolonged into a conspicuous nose.....25.
- Mandibles of soldier well developed.....24.
24. Front of head of soldier prolonged into a conspicuous nose reaching nearly to or beyond the end of the mandibles.....51.
- Front of head of soldier not prolonged into a nose that nearly reaches the end of the mandibles or beyond.....54.
25. Head of soldier with conspicuous constriction in the middle; legs proportionately very long, the hind tibia usually being longer than the head.....26.
- Head of soldier with a slight constriction in the middle; legs not proportionately long, the hind tibia always conspicuously shorter than the head.....28.
- Head of soldier with no constriction in the middle; legs not proportionately long, the hind tibia always conspicuously shorter than the head.....31.
26. Nose of soldier very large and long, covered with short hairs. *Nasutitermes* (*Angularitermes*) *nasutissimus*, sp. nov. p. 420.
- Nose of soldier comparatively slender, hairs only on the tip.....27.
27. Antennae of soldier with 15 segments; length of head 1.56–1.70 mm. *Nasutitermes* (*Constrictotermes*) *cavifrons* (Holm.) p. 419.
- Antennae of soldier with 13–14 segments; length of head 1.25–1.50 mm. *Nasutitermes* (*Velocitermes*) *beebei*, sp. nov. p. 416.
28. Head of soldier with only 6 bristles and no short hair.....29.
- Head of soldier covered with short hairs and a few bristles. *Nasutitermes* (*Subulitermes*) *snyderi*, sp. nov. p. 406.
29. Length of head of soldier 1.13–1.16 mm. *Nasutitermes* (*Subulitermes*) *oculatissimus*, sp. nov. p. 402.
- Length of head of soldier 1.22–1.38 mm.30.

30. Eye of imago very large, .43 mm. in diameter. *Nasutitermes* (*Subulitermes*) *osborni*, sp. nov. p. 404.
 Eye of imago medium sized, .30 mm. in diameter. *Nasutitermes* (*Subulitermes*) *raripilus*, sp. nov. p. 402.
 (Note: Soldiers of these two species are hard to distinguish.)
31. No hair on nose of soldier except at tip.....32.
 Nose of soldier sparsely covered with bristles or covered with minute hair.....43.
32. Top of head of soldier covered with short hair besides a few longer bristles.....42.
 Top of head and base of nose of soldier with bristles but short hair absent.....33.
33. 4 bristles near the base of the nose of soldier and 4 or more bristles on top of head.....40.
 4 bristles near base of nose of soldier and 2 bristles on top of head.....34.
34. Abdominal tergites of soldier covered with long hair in addition to longer bristles.....35.
 Abdominal tergites of soldier covered with minute hair and a row of longer bristles.....36.
35. Width of head of soldier .80–1.00 mm. *Nasutitermes* (N.) *comstockae*, sp. nov. p. 390.
 Width of head of soldier 1.10–1.22 mm. *Nasutitermes* (N.) *surinamensis* (Holmgren) p. 386.
36. Antennae of soldier with 13 segments.....38.
 Antennae of soldier with 11 or 12 segments.....37.
37. Nose of soldier slender.....29.
 Nose of soldier stout. *Nasutitermes* (N.) *ephratae* (Holmgren) p. 382.
38. Small species, length of head of soldier 1.16–1.24 mm. *Nasutitermes* (N.) *gaigei*, sp. nov. p. 395.
 Larger species, length of head of soldier over 1.34 mm.....39.
39. Imago with ocelli less than their diameter from the eyes. *Nasutitermes* (N.) *ephratae* (Holmgren) p. 382.
 Imago with ocelli more than their diameter from the eyes. *Nasutitermes* (N.) *costalis* (Holmgren) p. 379.
 (Note: Soldiers of these two species are very hard to distinguish.)
40. Head of soldier yellow; 4 bristles at base of nose and 4 bristles on top of head. *Nasutitermes* (N.) *octopilis* Banks p. 384.
 Head of soldier brown; 4 bristles at base of nose and 6 or more on top of head.....41.
41. Antennae of soldier with 14 segments; nose stout. *Nasutitermes* (N.) *guayanae* (Holmgren) p. 378.
 Antennae of soldier with 13 segments; nose slender. *Nasutitermes* (N.) *intermedius* Banks p. 389.
42. Small species; length of head of soldier 1.06–1.26 mm. *Nasutitermes* (N.) *banksi*, n. name p. 393.
 Larger species; length of head of soldier 1.64–1.80 mm. *Nasutitermes* (N.) *wheeleri*, sp. nov. p. 391.

43. Head of soldier with no short hair besides the bristles on top of head.....29.
 Head of soldier with very short hair covering top of head and usually with a few longer bristles.....44.
 Head of soldier with proportionately longer hair covering top of head.....46.
44. Comparatively large species, length of head of soldier 1.33-1.70 mm.....45.
 Comparatively small species, length of head of soldier 1.03-1.12 mm. *Nasutitermes* (*Subulitermes*) *baileyi*, sp. nov. p. 399.
45. Profile of head of soldier from tip of nose to top of head concave. *Nasutitermes* (*N.*) *brevipilus*, sp. nov. p. 396.
 Profile of head of soldier from tip of nose to top of head convex. *Nasutitermes* (*Convexitermes*) *manni*, sp. nov. p. 413.
46. Comparatively large species, length of head of soldier 1.73-1.83 mm.; antennae with 13 segments. *Nasutitermes* (*N.*) *acajutlae* (Holmgren) p. 383.
 Comparatively small species, length of head of soldier less than 1.35 mm.; antennae with 11 or 12 segments.....47.
47. Antennae of soldier with 12 segments. *Nasutitermes* (*Subulitermes*) *parvellus* (Silvestri) p. 400.
 Antennae of soldier with 11 segments.....43.
48. Nose of soldier conical; profile nearly convex from tip of nose to back of head, no constriction in the middle.....49.
 Nose of soldier straight and slender; profile not as above, a slight constriction in the middle of the head. *Nasutitermes* (*Subulitermes*) *snyderi*, sp. nov. p. 406.
49. Nose of soldier very stout at base; length of head 1.00-1.07 mm.....50.
 Nose of soldier not very stout at base, length of head 1.25-1.35 mm. *Nasutitermes* (*Convexitermes*) *nigricornis* (Holmgren) p. 409.
50. Nose of soldier dark brown; length of anterior wing of imago 7.70-7.87 mm. *Nasutitermes* (*Convexitermes*) *kartaboensis*, sp. nov. p. 410.
 Nose of soldier brown; length of anterior wing of imago 6.20-6.73 mm. *Nasutitermes* (*Convexitermes*) *mazaruniensis*, sp. nov. p. 412.
51. Mandibles of soldier extending beyond tip of nose; antennae with 14 segments. *Armitermes* (*A.*) *percutiens*, sp. nov. p. 370.
 Mandibles of soldier not reaching tip of nose.....52.
52. Antennae of soldier with 15 segments. *Armitermes* (*A.*) *teevani*, sp. nov. p. 372.
 Antennae of soldier with 13 or 14 segments.....53.
53. Large species, length of head of soldier 3.21-3.37 mm.; antennae with 14 segments. *Armitermes* (*A.*) *grandidens*, sp. nov. p. 373.
 Medium sized species, length of head of soldier 1.80-1.95 mm.; antennae with 13-14 segments. *Armitermes* (*A.*) *albidus* (Hagen) p. 368.
 Small species, length of head of soldier 1.50-1.54 mm.; antennae with 13 segments. *Armitermes* (*A.*) *minutus*, sp. nov. p. 375.
54. Mandibles of soldier extremely asymmetrical.....55

- Mandibles of soldier more or less symmetrical. 57.
55. Posterior margin of head of soldier lobed; head very flat. *Capritermes* (*Neocapritermes*) *planiceps*, sp. nov. p. 449.
Posterior margin of the head rounded; head not flat. 56.
56. Head of soldier long and narrow; sides parallel. *Capritermes* (*Neocapritermes*) *angusticeps*, sp. nov. p. 448.
Head of soldier proportionately wide, sides converging anteriorly. *Capritermes* (*Neocapritermes*) *bodkini* Silvestri p. 447.
57. Mandibles of soldier very slender, without teeth except at base; used for snapping. 58.
- Mandibles of soldier used for biting, usually powerful and toothed. 62.
58. Forehead of soldier flat without projection; antennae with 13 segments. *Mirotermes* (*Crepititermes*) *verruculosus*, sp. nov. p. 434.
Forehead of soldier with conspicuous projection or nose; antennae with 14 or 15 segments. 59.
59. Forehead and soldier with short conspicuous single-pointed nose without sharp ridge from point to base of antennae. 60.
- Forehead of soldier wide; projection with short point in middle and a distinct sharp ridge from point to base of antennae. *Mirotermes* (*Cavitermes*) *tuberosus*, sp. nov. p. 442.
60. Nose of soldier extending well beyond base of antennae; width of head .97 mm. *Mirotermes* (*M.*) *acutinasus*, sp. nov. p. 439.
Nose of soldier not extending much beyond antennae base. 61.
61. Width of head of soldier 1.30–1.45 mm. *Mirotermes* (*M.*) *inquilinus*, sp. nov. p. 441.
Width of head of soldier 1.09–1.16 mm. *Mirotermes* (*M.*) *hispaniolae* Banks p. 438.
Width of head of soldier .77–1.00 mm. *Mirotermes* (*M.*) *nigritus* (Silvestri) p. 436.
62. Forehead of soldier with 3-pointed projection. *Mirotermes* (*Spinitermes*) *trispinosus* (Bates) p. 444.
Forehead of soldier without 3-pointed projection. 63.
63. Mandibles of soldier sickle-shaped. 64.
- Mandibles of soldier elbowed, the anterior portion bent outward, tips curved inward; a single tooth on the inner edge at the elbow. *Orthognathotermes macrocephalus* (Holmgren) p. 452.
64. Pronotum of soldier with sharp lateral points; very large species. 65.
- Pronotum of soldier without sharp lateral points; medium sized or small species. 66.
65. Head of soldier thickly covered with short bristles; right mandible with a large tooth; width of head 6.74–6.85 mm. *Syntermes snyderi*, sp. nov. p. 359.
Head of soldier sparsely covered with short bristles; right mandible with no large teeth; width of head 4.75–4.96 mm. *Syntermes territus*, sp. nov. p. 360.
Head of soldier sparsely covered with bristles; right mandible with no large teeth; width of head 2.97–3.32 mm. *Syntermes parallelus* Silvestri. p. 361

66. The inner edges of the mandibles of the soldier with minute dentations. *Microcerotermes arboreus*, sp. nov. p. 454.
The inner edges of mandibles of soldier without minute dentations.....67.
67. Length of head of soldier with mandibles 2.01–2.33 mm.; mandibles short in relation to head; head proportionately long, sides parallel. *Cylindrotermes nordenskiöldi* Holm. p. 430.
Length of head of soldier with mandibles over 3.00 mm.....68.
68. Soldier with short tube projection on forehead; mandibles not strongly hooked at the end.....69.
Soldier without short projection on forehead; mandibles strongly hooked at the end; left mandible with a single tooth near the base. *Amitermes* (A.) *excellens* Silvestri p. 432.
69. Labrum of soldier nearly reaching tip of mandibles; left mandible without much dentation. *Cornitermes* (*Labiotermes*) *labralis* Holmgren p. 364.
Labrum of soldier not nearly reaching tip of mandibles; left mandible with a number of dentations. *Cornitermes* (C.) *pugnax*, sp. nov. p. 366.
70. Mandibles of soldiers degenerated into small functionless structures with or without points; long projection in front of the head.....71.
Mandibles of soldier not degenerate.....76.
71. Projection in front of head of soldier long and narrow, forked at tip.....72.
Projection in front of head of soldier not forked at tip.....25.
72. Head of soldier conspicuously constricted behind; anterior margin of pronotum projecting forward; head slightly darker than the rest of the body. *Rhinotermes* (R.) *subfusciceps*, sp. nov. p. 356.
Head of soldier not conspicuously constricted behind; anterior margin of pronotum not emarginate at tip73.
73. Antennae with 14 segments. *Rhinotermes* (R.) *longilabius*, sp. nov. p. 352.
Antennae with 15 or 16 segments.....74.
74. Head brown. *Rhinotermes* (R.) *tenebrosus*, sp. nov. p. 354.
Head yellow.....75.
75. Head with about 8 long bristles scattered about. *Rhinotermes* (R.) *marginalis* (Linné) p. 349.
Head with numerous bristles scattered about. *Rhinotermes* (R.) *hispidus*, sp. nov. p. 351.
76. Soldier with degenerate eyes visible as light spots behind the base of the antennae except in a few cases where the head is mostly black and foreshortened.....77.
Soldiers without degenerate eye; head nearly always light in color.....78.
77. Head of soldier proportionately long, brownish or yellowish; mandibles normal.....12.
Head of soldier proportionately short, partially or entirely black; mandibles very short.....16.
78. Front of head of soldier prolonged into a conspicuous nose reaching to or beyond the tip of the mandibles.....51.

- Front of head with or without conspicuous nose; if present, the nose is much shorter than the mandibles.....79.
79. Mandibles of soldier extremely asymmetrical55.
Mandibles of soldier more or less symmetrical80.
80. Mandibles of soldier very slender, without teeth except near the base; used for snapping.....58.
Mandibles of soldier used for biting, usually powerful and toothed.....81.
81. Pronotum of soldier with sharp lateral points; large species.....65.
Pronotum of soldier without sharp lateral points; medium sized or small species.....82.
82. Left mandible of soldier with 2 large conspicuous teeth.....5.
Left mandible of soldier without 2 large conspicuous teeth.....83.
83. Mandibles sickle-shaped.....84.
Mandible elbowed, the anterior portion bent outward, tips curved inward; a single tooth on the inner edge at the elbow.
Orthognathotermes macrocephalus (Holmgren) p. 161.
84. Left mandible without teeth or dentations except near the base.....85.
Left mandible with one or more conspicuous teeth or dentations.....87.
85. Forehead of soldier with 3-pointed projection. *Mirotermes* (*Spinitermes*) *trispinosus* (Bates) p. 444.
Forehead of soldier without 3-pointed projection.....86.
86. Head proportionately very long; mandibles short, .65-.75 mm. long; antennae with 11 segments. *Cylindrotermes nordenskiöldi* Holmgren p. 430.
Antennae with 14-16 segments; mandibles .90-1.25 mm. long.....10.
87. Both mandibles with minute dentations along entire inner edge.
Microcerotermes arboreus, sp. nov. p. 454.
Mandibles without minute dentations along the entire inner edge.....68.

LIST OF SPECIES

Family KALOTERMITIDAE

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Subfamily KALOTERMITINAE

Genus *Kalotermes*

Subgenus *Neotermes*

Kalotermes* (*Neotermes*) *clearei*, sp. nov.**Kalotermes* (*Neotermes*) *kartaboensis*, sp. nov.***Kalotermes* (*Neotermes*) *holmgreni* Banks

Subgenus *Rugitermes*

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Kalotermes* (*Rugitermes*) *bicolor*, sp. nov.**Kalotermes* (*Rugitermes*) *flavicinctus*, sp. nov.*****Kalotermes* (*Rugitermes*) *magninotus*, sp. nov.**

Subgenus *Cryptotermes*

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Kalotermes (*Cryptotermes*) *brevis* (Walker)

Kalotermes (Cryptotermes) verruculosus, sp. nov.

Kalotermes (Cryptotermes ?) cubicoceps, sp. nov.

Subgenus *Glyptotermes*

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Kalotermes (Glyptotermes) pellucidus, sp. nov.

Kalotermes (Glyptotermes) perparvus, sp. nov.

Kalotermes (Glyptotermes) guianensis, sp. nov.

Kalotermes (Glyptotermes) hospitalis, sp. nov.

Subgenus *Lobitermes*

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Kalotermes (Lobitermes) nigriceps, sp. nov.

Family RHINOTERMITIDAE

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Subfamily LEUCOTERMITINAE

Genus *Leucotermes*

Leucotermes tenuis (Hagen)

Leucotermes crinitus, sp. nov.

Subfamily COPTOTERMITINAE

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Genus *Coptotermes*

Coptotermes marabitanas (Hagen)

Subfamily RHINOTERMITINAE

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Genus *Rhinotermes*

Subgenus *Rhinotermes*

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Rhinotermes (Rhinotermes) marginalis (L.) (Hagen)

Rhinotermes (Rhinotermes) hispidus, sp. nov.

Rhinotermes (Rhinotermes) longilabius, sp. nov.

Rhinotermes (Rhinotermes) tenebrosus, sp. nov.

Rhinotermes (Rhinotermes) subfusciceps, sp. nov.

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Syntermes snyderi, sp. nov.

Syntermes territus, sp. nov.

Syntermes parallelus Silvestri

Genus *Cornitermes*

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Subgenus *Labiatermes*

Cornitermes (Labiatermes) labralis Holmgren

Subgenus *Cornitermes*

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Cornitermes (Cornitermes) pugnax, sp. nov.

Genus *Armitermes*

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Subgenus *Armitermes*

Armitermes (*Armitermes*) *albidus* (Hagen)

***Armitermes* (*Armitermes*) *percutiens*, sp. nov.**

***Armitermes* (*Armitermes*) *teevani*, sp. nov.**

***Armitermes* (*Armitermes*) *grandidens*, sp. nov.**

***Armitermes* (*Armitermes*) *minutus*, sp. nov.**

Genus *Nasutitermes*

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Subgenus *Nasutitermes*

Nasutitermes (*Nasutitermes*) *guayanae* (Holmgren)

Nasutitermes (*Nasutitermes*) *costalis* (Holmgren)

Nasutitermes (*Nasutitermes*) *ephratae* (Holmgren)

Nasutitermes (*Nasutitermes*) *octopilis* Banks

Nasutitermes (*Nasutitermes*) *surinamensis* (Holmgren)

Nasutitermes (*Nasutitermes*) *acajutlae* (Holmgren)

Nasutitermes (*Nasutitermes*) *intermedius* Banks

***Nasutitermes* (*Nasutitermes*) *comstockae*, sp. nov.**

***Nasutitermes* (*Nasutitermes*) *wheeleri*, sp. nov.**

***Nasutitermes* (*Nasutitermes*) *banski*, nom. nov.**

***Nasutitermes* (*Nasutitermes*) *gaigei*, sp. nov.**

***Nasutitermes* (*Nasutitermes*) *brevipilus*, sp. nov.**

Subgenus *Subulitermes*

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***Nasutitermes* (*Subulitermes*) *baileyi*, sp. nov.**

Nasutitermes (*Subulitermes*) *parvellus* (Silvestri)

***Nasutitermes* (*Subulitermes*) *oculatissimus*, sp. nov.**

***Nasutitermes* (*Subulitermes*) *raripilus*, sp. nov.**

***Nasutitermes* (*Subulitermes*) *osborni*, sp. nov.**

***Nasutitermes* (*Subulitermes*) *snyderi*, sp. nov.**

Subgenus *Convexitermes*

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Nasutitermes (*Convexitermes*) *nigricornis* (Holmgren)

***Nasutitermes* (*Convexitermes*) *kartaboensis*, sp. nov.**

***Nasutitermes* (*Convexitermes*) *mazaruniensis*, sp. nov.**

***Nasutitermes* (*Convexitermes*) *manni*, sp. nov.**

Subgenus *Velocitermes*

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***Nasutitermes* (*Velocitermes*) *beebei*, sp. nov.**

Subgenus *Constrictotermes*

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Nasutitermes (*Constrictotermes*) *cavifrons* (Holmgren)

Subgenus *Angularitermes*, subg. nov.

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***Nasutitermes* (*Angularitermes*) *nasutissimus*, sp. nov.**

Genus *Anoplotermes*

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Subgenus *Anoplotermes*

Anoplotermes (**Anoplotermes**) **meridianus**, nom. nov.
Anoplotermes (**Anoplotermes**) **silvestrii**, sp. nov.
Anoplotermes (**Anoplotermes**) **banksi**, sp. nov.
Anoplotermes (**Anoplotermes**) **brevipilus**, sp. nov.
Anoplotermes (**Anoplotermes**) **subterraneus**, sp. nov.
Anoplotermes (**Anoplotermes**) **nigripunctatus**, sp. nov.

Subgenus *Speculitermes* p. 427

Anoplotermes (**Speculitermes**) **arboreus**, sp. nov.

Genus *Cylindrotermes* p. 428

Cylindrotermes nordenskiöldi Holmgren

Genus *Amitermes* p. 430

Subgenus *Amitermes*

Amitermes (*Amitermes*) *excellens* Silvestri

Genus *Mirotermes* p. 432

Subgenus **Crepititermes** subg. nov.

Mirotermes (**Crepititermes**) **verruculosus**, sp. nov.

Subgenus *Mirotermes* p. 435

Mirotermes (*Mirotermes*) *nigritus* (Silvestri)

Mirotermes (*Mirotermes*) *hispaniolae* Banks

Mirotermes (**Mirotermes**) **acutinasus**, sp. nov.

Mirotermes (**Mirotermes**) **inquilinus**, sp. nov.

Subgenus *Cavitermes*, subg. nov. p. 442

Mirotermes (**Cavitermes**) **tuberosus**, sp. nov.

Subgenus *Spinitermes* p. 444

Mirotermes (*Spinitermes*) *trispinosus* (Bates)

Genus *Capritermes* p. 445

Subgenus *Neocapritermes*

Capritermes (*Neocapritermes*) *bodkini* Silvestri

Capritermes (**Neocapritermes**) **angusticeps**, sp. nov.

Capritermes (**Neocapritermes**) **planiceps**, sp. nov.

Genus *Orthognathotermes* p. 451

Orthognathotermes macrocephalus (Holmgren)

Genus *Microcerotermes* p. 453

Microcerotermes arboreus, sp. nov.

Family KALOTERMITIDAE Banks

Holmgren (1911) divided this family (= Protermitidae) into four subfamilies, namely Termopsinae, Hodotermitinae, Stolotermitinae, and Kalotermitinae. Of these only the Kalotermitinae are known from British Guiana.

Subfamily KALOTERMITINAE Holmgren

Holmgren (1911) placed two genera, *Porotermes* and *Kalotermes*, in this subfamily. Several authors have divided up the large genus *Kalotermes* into several genera but it seems less confusing to use Holmgren's classification for both genera and subgenera for the present, as no one has studied the group as a whole since 1911. Many of Holmgren's subgenera, however, seem distinct enough to warrant generic rank. *Kalotermes* is well represented in British Guiana.

Genus *Kalotermes* Hagen

Holmgren (1911) recognizes ten subgenera belonging to this genus. Of these five are known from British Guiana.

Subgenus *Neotermes* Holmgren

In the sense used by Holmgren this subgenus has a large distribution with fifty-two species. It is well represented in the Ethiopian, Oriental, Australian, Palaearctic and Neotropical regions. Three species were found in British Guiana, two of which seem to be new.

Kalotermes* (*Neotermes*) *clearei*, sp. nov. = *holmgreni

(Fig. 24)

Imago.—Head widely oval, rather short; brownish yellow; clothed with a number of rather short bristles; no median line or Y-suture visible.

Antennae with 18–19 segments, 2d segment equal to the 3d, 4th smaller than the 3d or about equal.

Eyes large, front margin straight near the base of the antennae. Ocelli medium sized, very close to the eyes.

Pronotum brownish yellow with numerous bristles; front margin concave, sides rounded, posterior margin rounded with middle very slightly emarginate.

Pulvillus present.

Wings transparent yellow brown; subcosta, radius, and media brown and distinct, cubitus not so distinct, with 12–16 branches; many small veins or thickenings between the radius and media in the outer half of the wing.

Abdominal tergites yellow, with numerous bristles.

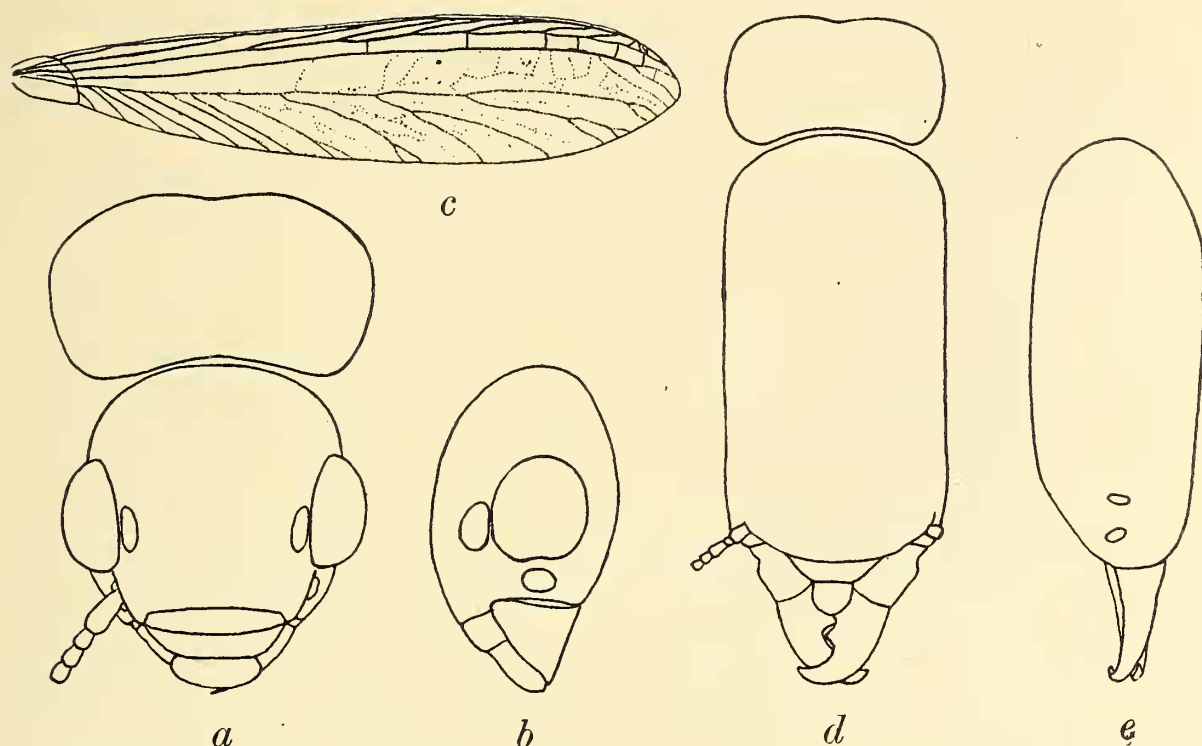


Fig. 24. *Kaloterms (Neoterms) clearei*, sp. nov. a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, imago, wing; d, soldier, dorsal view of head and pronotum; e, soldier, lateral view of head.

Measurements.—

Length with wing.....	15.00–16.00 mm.
Length without wings.....	9.00–11.00 mm.
Length of head.....	1.82– 2.02 mm.
Width of head.....	1.71– 1.76 mm.
Length of antennae.....	2.73 mm.
Diameter of eye.....	.67 mm.
Length of pronotum.....	.80 mm.
Width of pronotum.....	1.90 mm.
Length of hind tibia.....	1.45 mm.
Length of anterior wing.....	11.50 mm.
Width of anterior wing.....	3.07 mm.

Comparison with other species.—*K. (Neoterms) arthuri-muelleri* von Rosen, *K. fulvescens* Silv., *K. hirtellus* Silv. and *K. modestus* Silv. are all smaller. *K. castaneus* (Burm.) Banks has only 16 segments in the antennae. *K. chilensis* (Blanchard) Desn., and *K. holmgreni* Banks have rounder eyes.

Soldier.—Head brownish yellow, elongated; sides straight and parallel; front rather flat, sloping at an angle of about 35°; sparsely covered with short bristles.

Antennae with 15–17 segments, in all cases 3d segment conspicuously longer than 2d or 4th.

Eyes unpigmented, oval, about their length removed from the base of the antennae.

Mandibles black; left with 3 conspicuous teeth; right with 2 large teeth.

Pronotum yellow, front margin evenly concave; sides rounded not converging toward the rear; posterior margin nearly straight; pronotum about the same width as the head.

Spines on tibia and claws on tarsi with dark points. Pulvillus absent.

Abdomen pale yellow.

Measurements.—

Total length	11.82–12.94 mm.
Length of head	6.15 mm.
Width of head	2.71– 2.76 mm.
Length of antennae	2.41– 2.53 mm.
Length of pronotum	1.18– 1.23 mm.
Width of pronotum	2.53– 2.88 mm.
Length of hind tibia	1.71– 1.82 mm.
Length of left mandible	2.12– 2.23 mm.

Comparison with other species.—*K. castaneus* (Burm.) Banks has the 3d segment of the antennae not larger than the 2d. *K. wagneri* Desn. close, but the eye is pigmented and the measurements are larger. *K. fulvescens* Silv., *K. hirtellus* Silv., *K. latifrons* Silv., and *K. modestus* Silv. are all smaller.

Type locality.—Georgetown, British Guiana.

Range.—Known only from the type locality.

Holotype.—Winged Imago.

Morphotype.—Soldier.

Described from four winged imagos and two soldiers collected by L. D. Cleare, Jr. at Georgetown, B. G., in September, 1914, from a single colony in the Botanic Gardens. I take pleasure in naming the species in honor of the collector.

***Kalotermes (Neoterme) kartaboensis*, sp. nov.**

(Fig. 25, *a*, *b*, *c*)

Imago.—Head yellow brown with numerous bristles; oval.

Antennae with 18 segments; 2d, 3d, and 4th equal.

Eyes rather large, about $\frac{2}{3}$ their diameter from the lower margin of the head (.29 mm.). Front margin straight.

Ocelli medium sized, in contact with the eyes.

Pronotum yellow brown with numerous bristles; wider than head; sides rounded, posterior margin nearly straight.

Pulvillus present between claws.

Wings hyaline, veins near costal margin brown; subcosta, radius, and media distinct; cubitus indistinct except near the base. Radius with 6–8 branches; crossveins between the radius and media; cubitus 11–14 branched.

Abdomen yellow brown, tergites with numerous bristles.

Measurements.—

Length with wings	13.00–14.00 mm.
Length without wings	8.00– 8.50 mm.
Length of head	2.00– 2.12 mm.

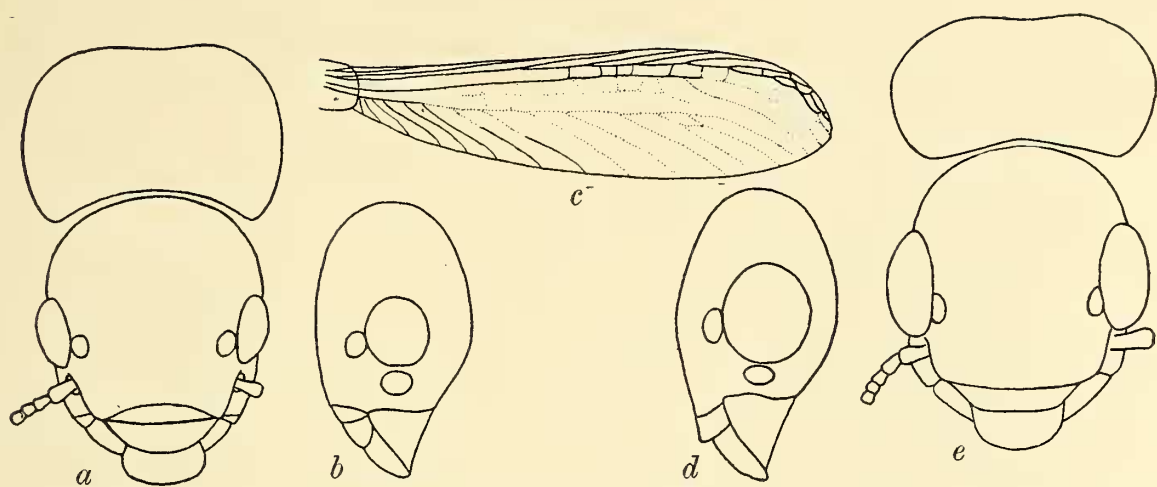


Fig. 25. *Kaloterme (Neoterme) kartaboensis*, sp. nov. a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, imago, wing.
Kaloterme (Neoterme) holmgreni Banks. d, imago, lateral view of head; e, imago, dorsal view of head and pronotum.

Measurements.—

Width of head	1.76 mm.
Length of antennae	2.95 mm.
Diameter of eye	.43 - .47 mm.
Length of pronotum	1.23 mm.
Width of pronotum	2.06 mm.
Length of anterior wing	10.29 mm.
Width of anterior wing	2.94 mm.

Comparison with other species.—*K. castaneus* (Burm.) Banks has only 16 segments in the antennae. *K. hirtellus* Silv. has 19 segments in the antennae and is smaller. The wings are wider in *K. chilensis* (Blanchard) Desn. The eye in *K. holmgreni* Banks is only ½ its diameter from the lower margin of the head and is round in front. *K. arthuri-muelleri* von Rosen, *K. fulvescens* Silv. and *K. modestus* Silv. are all smaller.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Winged imago.

Described from five imagos collected by the author at Kartabo.

Kaloterme (Neoterme) holmgreni Banks

Neoterme holmgreni Banks (1918), p. 659, pl. LI, fig. 9 (imago).

(Fig. 25, d, e)

Imago.—Head reddish yellow, short, widely oval with a number of rather long bristles.

Antennae with 17 segments, 2d segment larger than the 3d, 3d equal to the 4th.

Eyes large, a little less than ½ their width (.19 mm.) from the lower margin; front margin rounded.

Ocelli very close to the eyes, oval.

Pronotum the same color as the head and about the same width as the head. Pulvillus conspicuous.

Wings brownish yellow, transparent; costal veins, radius, subcosta and media distinct; cubitus not so distinct and with 11-14 branches. Venation very similar to *K. kartaboensis*, n. sp.

Abdominal tergites yellow.

Measurements.—

Length with wings.....	14.00 mm.
Length without wings.....	8.00 mm.
Length of head.....	1.83 mm.
Width of head.....	1.57 mm.
Length of antennae.....	2.25 mm.
Diameter of eye.....	.64 mm.
Length of pronotum.....	.80 mm.
Width of pronotum.....	1.57 mm.
Length of hind tibia.....	1.35 mm.
Length of anterior wing.....	10.25 mm.
Width of anterior wing.....	2.95 mm.

Comparison with other species.—*K. castaneus* (Burm.) Banks larger and antennae with 16 segments. *K. chilensis* (Blanchard) Desn. larger. *K. fulvescens* Silv. close but smaller. *K. hirtellus* Silv. close but wings differ in shape and the measurements are slightly smaller. *K. modestus* Silv. has a wider pronotum.

Type locality.—Panama, Taboga Island (Banks, 1918).

New locality.—Georgetown, British Guiana.

Range.—Panama, British Guiana.

This description is taken from a single winged imago collected by the author in Georgetown, B. G., May 26, 1920. It seems to answer the description given by Banks (1918).

Subgenus *Rugitermes* Holmgren

This subgenus is small, formerly known only from southern South America and including three species. Three species were found at Kartabo, all of which seem to be new.

***Kalotermos (Rugitermes) bicolor*, sp. nov.**

(Fig. 26)

Imago (Queen).—Head black or very dark brown.

Antennae yellow (broken beyond 9th segment), 2d, 3d, and 4th segments about equal.

Eyes small, .26 mm. removed from the lower margin of the head.

Ocelli rather small, .08 mm. removed from the eyes.

Labrum yellowish. Clypeus pale. Sides of thorax dark.

Pronotum yellow, contrasting strongly with the head and wing scales; front margin concave, sides rounded, hind margin somewhat concave.

Coxae, femora and upper part of tibiae dark, lower part of tibiae yellowish.

Wing scales very dark brown, contrasting strongly with the pronotum.

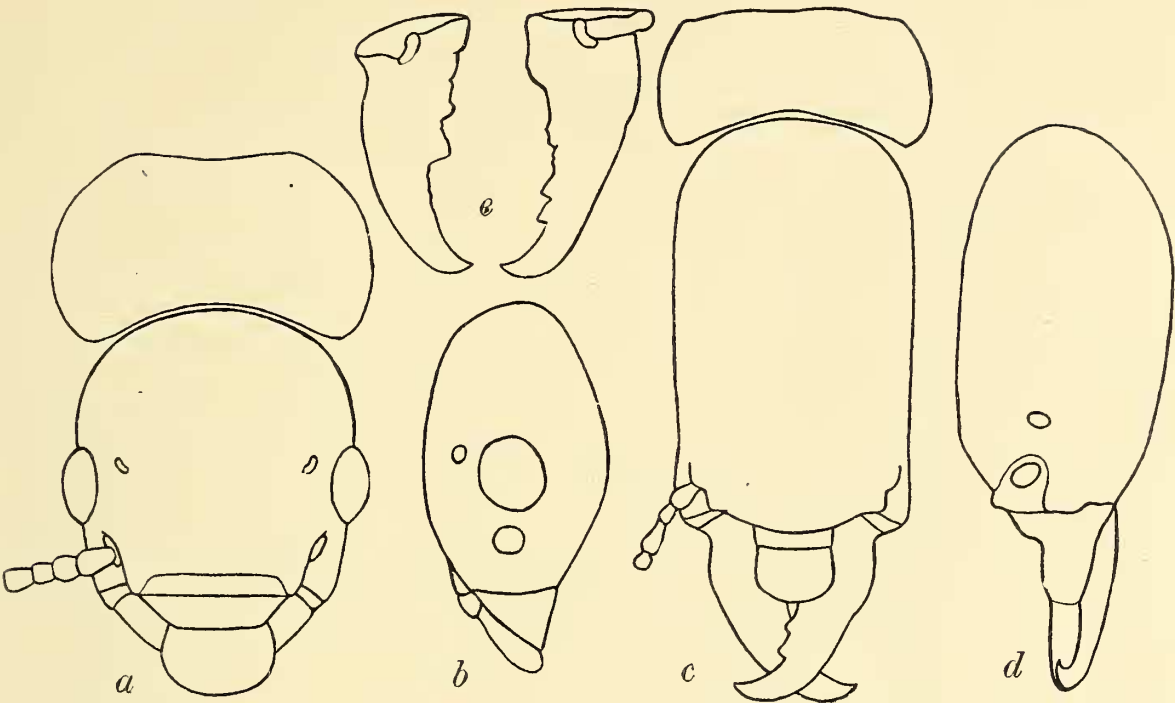


Fig. 26. *Kaloterms (Rugitermes) bicolor*, sp. nov. a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, soldier, dorsal view of head and pronotum; d, soldier, lateral view of head; e, soldier, mandibles.

Abdominal tergites and sternites yellow.

Measurements.—

Length of head	1.86 mm.
Width of head	1.51 mm.
Diameter of eye	.35 mm.
Length of pronotum	.77 mm.
Width of pronotum	1.65 mm.
Length of hind tibia	1.28 mm.
Length of queen	8.27 mm.

Comparison with other species.—Differs from *K. magninotus*, n. sp., and *K. flavicinctus*, n. sp. in that the upper part of the tibia is the same color as the femur while the lower part near the tarsus is conspicuously lighter. *K. bicolor* is also larger than these two species. *K. rugosus* Hagen Silv. is smaller. *K. occidentalis* Silv. differs in the following measurements; width of head 1.35 mm., length of pronotum 1.00 mm., width of pronotum 1.70 mm. *K. nodulosus* Hagen differs in that the pronotum is narrower than the head.

Soldier.—Head yellowish brown, darker in front than behind; rectangular, sides straight and parallel. Front covered with numerous bristles which grow scarce toward the rear. Forehead rather flat, sloping gradually.

Antennae with 14–17 segments; in all cases the 3d segment is conspicuously larger than the 2d, the 2d somewhat longer than the 4th.

Eyes unpigmented. A small white spot above the eye may possibly be a rudimentary ocellus.

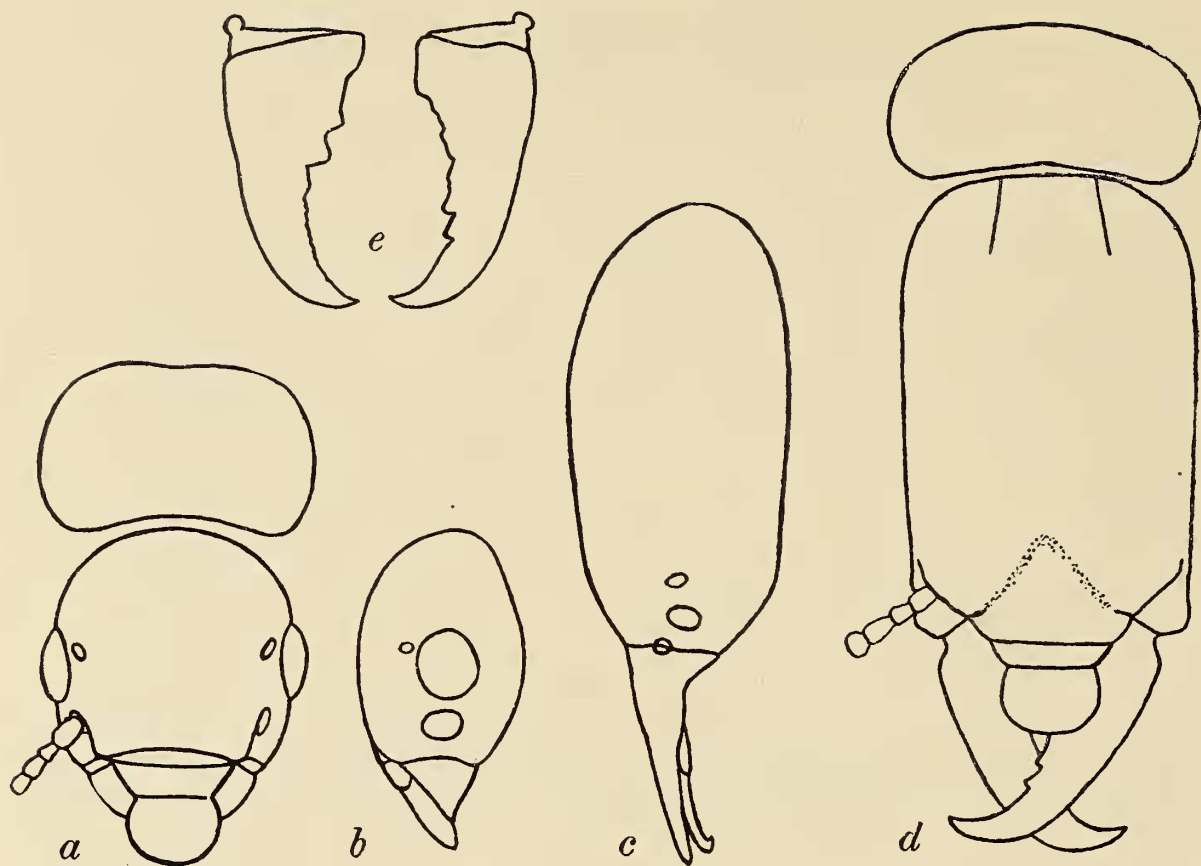


Fig. 27. *Kaloterme (Rugiterme) flavicinctus*, sp. nov. a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, soldier, lateral view of head; d, soldier, dorsal view of head and pronotum; e, soldier, mandibles.

Mandibles black, the left with several rather small teeth, the right with 2 conspicuous teeth.

Pronotum yellow, same color as back of head; front margin concave, sides rounded, posterior margin bow-shaped, forming an angle with the sides.

Pulvillus present. Abdomen yellow.

Measurements.—

Total length	8.86–10.99 mm.
Length of head	3.78– 4.25 mm.
Width of head	1.80– 2.07 mm.
Length of pronotum	.67– .93 mm.
Width of pronotum	1.67– 2.15 mm.
Length of hind tibia	1.28– 1.35 mm.

Comparison with other species.—*K. magninotus* and *K. flavicinctus* are both conspicuously smaller. In *K. occidentalis* Silv. the width of the pronotum is 2.40 mm. and the length of the pronotum 1.20 mm. In *K. rugosus* Hag. Silv. the width of the head is 1.70 mm. and the length of the pronotum 1.00 mm. The antennae of *K. rugosus* has 13 segments.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Queen.

Morphotype.—Soldier.

The description was taken from a single queen and numerous soldiers collected by the author from a single colony at Kartabo.

Kalotermes (Rugitermes) flavicinctus, sp. nov.

(Fig. 27)

Imago (Queen).—Head medium dark brown, contrasting strongly with the pronotum; widely oval.

Antennae yellow, the 2d segment slightly longer than the 3d, the 3d slightly longer than the 4th.

Eyes rather small, .126 mm. removed from the lower margin of the head; somewhat oval in shape.

Ocelli medium sized, oval, .032 mm. removed from the eyes.

Labrum yellow, clypeus white. Sides of thorax yellow, about the same color as the abdomen.

Pronotum yellow, contrasting strongly with the dark head and wing scales.

Legs yellow throughout. Pulvillus conspicuous.

Wing scales nearly as dark as the head, contrasting strongly with the yellow pronotum.

Abdominal tergites yellow; sternites brownish, much darker than the tergites.

Measurements.—

Length of head	1.38 mm.
Width of head	1.19 mm.
Diameter of eye	.32 mm.
Length of pronotum	.61 mm.
Width of pronotum	1.16 mm.
Length of hind tibia	.93 mm.
Length of queen	5.67 mm.

Comparison with other species.—This is the smallest species of *Rugitermes* yet known and differs from *K. bicolor*, *K. magninotus*, *K. nodulosus*, and *K. rugosus* in having the sides of the thorax the same color as the abdomen and the legs uniformly yellow throughout.

Soldier.—Head yellow brown in back, darker in front; clothed with numerous bristles which grow scarcer toward the rear; head long, sides straight and parallel, hind margin rounded, front sloping slightly with a very shallow groove in the middle.

Antennae with 15–16 segments, the 3d segment longer than the 2d and enlarged at the tip, the 2d segment longer than the 4th. The first 3 segments are darker than the rest, which are yellow.

Mandibles black, the left with several rather small teeth and the right with 2 conspicuous teeth.

Pronotum yellow with numerous bristles; front margin concave, sides rounded, hind margin with 2 very wide angles. Pronotum about the same width as the head or very slightly wider.

Abdomen yellow with numerous bristles on the tergites and sternites.

Measurements.—

Total length.....	6.03 mm.
Length of head.....	2.89–3.28 mm.
Width of head.....	1.19–1.35 mm.
Length of pronotum.....	.58–.67 mm.
Width of pronotum.....	1.19–1.35 mm.
Length of hind tibia.....	.83–.99 mm.

Comparison with other species.—Differs from *K. occidentalis* Silv. in size and the proportion of the width of the pronotum to the head. Differs from *K. magninotus* in the pronotum being the same width as the head while in *K. magninotus* the pronotum is wider than the head and is also proportionately longer. The femora of *K. flavicinctus* are proportionately more slender than in *K. magninotus*.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Queen.

Morphotype.—Soldier.

The description was taken from one queen and three soldiers collected by the author from a single colony at Kartabo.

***Kalotermes (Rugitermes) magninotus*, sp. nov.**

(Fig. 28)

Imago (King).—Head black. Antennae yellowish, the 2d segment equals the 3d, the 3d is a little longer than the 4th.

Eyes rather small, .26 mm. removed from the lower margin.

Ocelli small, .064 mm. removed from the eyes.

Labrum yellow. Clypeus white. Sides of thorax brown.

Pronotum yellow, anterior margin concave, sides rounded, converging somewhat near the rear; posterior margin somewhat emarginate.

Legs yellowish brown throughout; pulvillus conspicuous.

Wing scales dark brown, contrasting strongly with the yellow pronotum and abdomen.

Abdominal tergites yellow; sternites brownish yellow, a little darker than the tergites.

Measurements.—

Length of head.....	1.48 mm.
Width of head.....	1.25 mm.
Diameter of eye.....	.32 mm.
Length of pronotum.....	.71 mm.
Width of pronotum.....	1.35 mm.
Length of hind tibia.....	1.00 mm.

Comparison with other species.—Differs from *K. flavicinctus* in being a

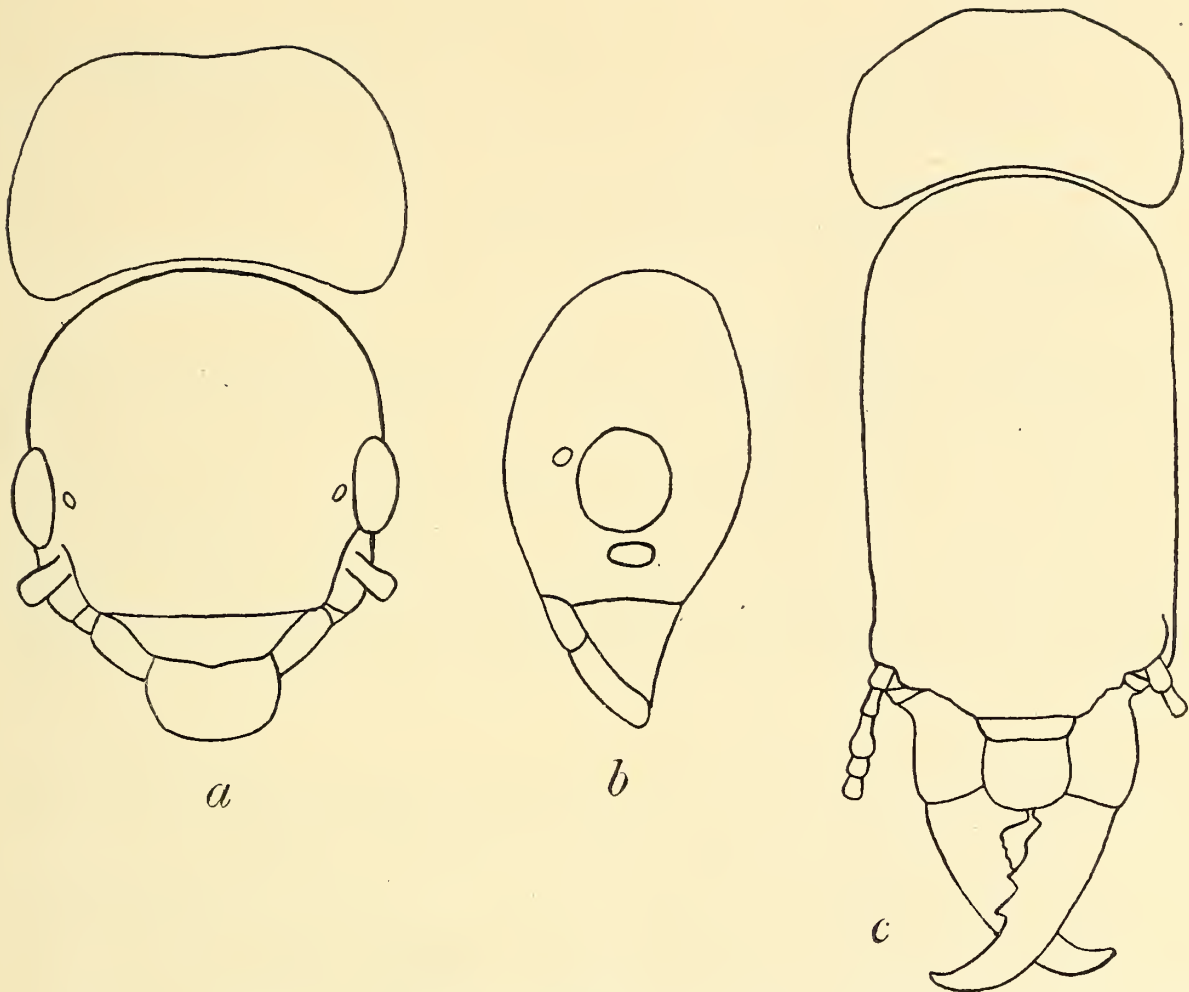


Fig. 28. *Kaloterмес (Rugiterмес) magninotus*, sp. nov. a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, soldier, dorsal view of head and pronotum.

little larger, the head and wing scales are a little darker, the sides of the thorax are conspicuously darker, and the legs are darker. Differs from *K. bicolor* in having the legs uniform in color throughout. *K. magninotus* is close to the description of *K. rugosus* and may possibly be that species. However, as the soldiers which Silvestri (1903) assigns to this species differ so much in size from those of *K. magninotus*, it seems best to keep the species separate for the present. *K. occidentalis* is larger. The descriptions of *K. nodulosus* are not detailed enough to be sure of the species, but as Hagen (1858) describes the feet as yellowish except near the base and states that the pronotum is narrower than the head, I do not believe that *K. magninotus* can be assigned to *K. nodulosus*.

Soldier.—Antennae with 13–14 segments.

Differs from *K. flavicinctus* in size, the femora are proportionately much larger and the pronotum is proportionately wider and longer in relation to the head. *K. rugosus* Hag. Silv. and *K. occidentalis* Silv. are larger.

Measurements.—

Length of head	3.21–3.53 mm.
Width of head	1.38–1.48 mm.
Length of pronotum	.71–.83 mm.

Measurements.—

Width of pronotum	1.51–1.67 mm.
Length of hind tibia	1.03–1.12 mm.
Length of left mandible	1.42 mm.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—King.

Morphotype.—Soldier.

Described from one king and numerous soldiers collected by the author from three different colonies at Kartabo.

Subgenus *Cryptotermes* Banks

This subgenus now contains twenty-seven described species and is known from the Oriental, Australian, Ethiopian, Nearctic and Neotropical regions. Two of the three species found in British Guiana are new, which makes seven Neotropical species of the subgenus.

Kalotermes (Cryptotermes) brevis (Walker)

The following synonymy is taken from the literature and very probably contains more than one species, as the imago of this subgenus are rather difficult to separate:

- Termes brevis* Walker (1853), p. 524 (imago).
- Calotermes brevis* Hagen (1858), p. 68 (imago), pl. 2, fig. 6; pl. 3, fig. 5 (imago).
- Termes indecisus* Walker (1853), p. 524 (imago).
- Termes flavicollis* Walker (1853), p. 502 (No. 1, imago).
- Termes lucifugus* Walker (1853), p. 505 (No. 2, imago).
- Calotermes brevis* Hagen (1858a), p. 10 (imago).
- Calotermes brevis* Hagen (1860a), p. 101 (biology, etc.).
- Calotermes (Cryptotermes) brevis* Holmgren (1911), p. 55.
- Calotermes brevis* Desneux (1915), p. 6.
- Cryptotermes brevis* Banks (1919), p. 476 (locality).
- Cryptotermes brevis* Banks (and Snyder) (1920), p. 36, text-fig. 23(3) (soldier).

(Fig. 29)

Imago.—Head medium reddish brown, lighter on the sides and in front; oval; clothed with short hairs.

Antennae with 16–18 segments; the 2d segment about equal to the 3d or 4th.

Eyes of medium size, shape varying somewhat from subtriangular to circular in individuals from the same colony; about $\frac{3}{4}$ their diameter from the lower margin of the head.

Ocelli of medium size; in contact with the eyes.

Pronotum same color as the head; narrower than the head, sides depressed and rounded; posterior margin slightly emarginate; covered with short hairs.

Wings hyaline; costal margin and radius brown, radius with numerous accessory veins; subcosta and radius distinct, media and cubitus indistinct, the media running into the radius about $\frac{1}{4}$ the length of the wing from the tip; cubitus with 11–17 branches.

Abdomen same color as the head; clothed with short hairs.

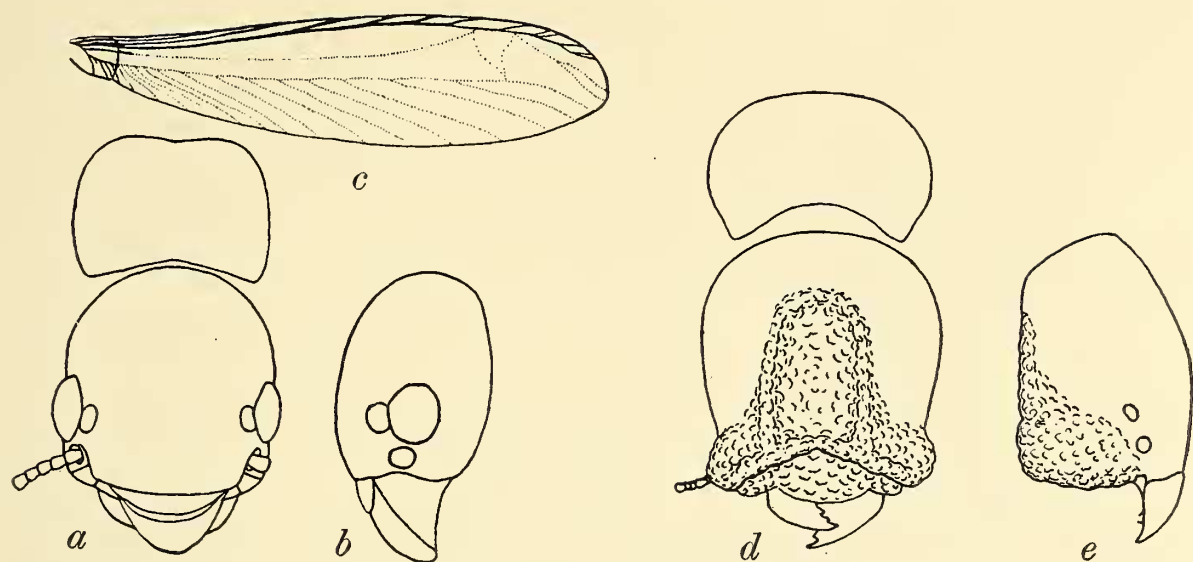


Fig. 29. *Kaloterms (Cryptoterms) brevis* (Walker). a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, imago, wing; d, soldier, dorsal view of head and pronotum; e, soldier, lateral view of head.

Measurements.—

Length with wings.....	10.59–11.76 mm.
Length without wings.....	5.00– 5.88 mm.
Length of head.....	1.23– 1.35 mm.
Width of head.....	1.05– 1.12 mm.
Length of antennae.....	1.76– 1.93 mm.
Diameter of eye.....	.11– .13 mm.
Length of pronotum.....	.59– .65 mm.
Width of pronotum.....	.94– 1.00 mm.
Length of hind tibia.....	.90 mm.
Length of anterior wing.....	8.65– 8.74 mm.
Width of anterior wing.....	2.23– 2.35 mm.

Comparison with other species.—*K. brevicollis* Banks much smaller. *K. dudleyi* Banks seems to be a little smaller, otherwise the description is very close. *K. cavifrons* Banks is smaller and the antennae have 15 segments. *K. infumatus* Banks differs in that the cubitus bends upward and meets the radius near the tip of the wing. Agrees with the description of *K. pseudobrevis* Fuller and is probably the same species.

Remarks.—Walker gives the length as 18 mm. (8 lines). Hagen, however, gives the length with wings as 9 mm. and Hagen supposedly went over Walker's collection.

Soldier.—Head black merging to dark brown on the sides and back; clothed with numerous short hairs; short, top concave and front concave leaving sharp ridges between the front and sides and the front and top, ridges between the top and sides not as sharp as the others but distinct; front, top, and anterior portion of the sides above the base of the antennae roughened.

Antennae yellow; with 13 segments, the 3d segment very short.

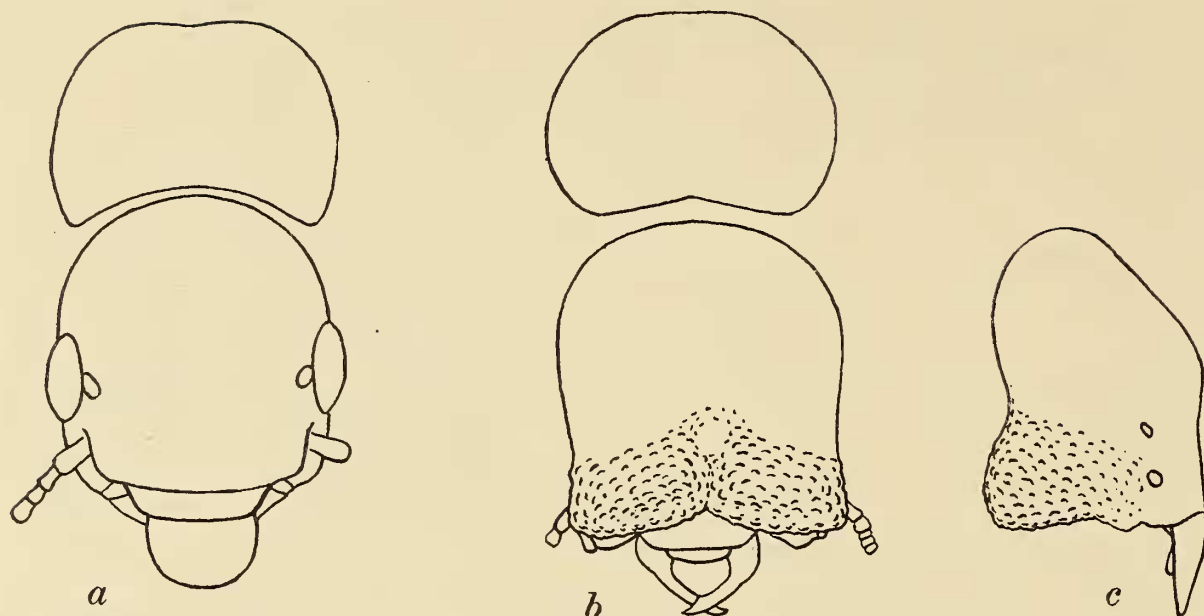


Fig. 30. *Kaloterme (Cryptoterme) verruculosus*, sp. nov. .a, imago, dorsal view of head and pronotum; b, soldier, dorsal view of head and pronotum; c, soldier, lateral view of head.

Eyes distinguishable behind the base of the antennae, lighter than the head and darker than the antennae.

Mandibles black.

Pronotum the same color as the head except a few spots of opaque yellow; anterior margin strongly concave, ending in 2 sharp points where it meets the sides; sides and posterior margin rounded. Legs pale. Abdomen pale with numerous short hairs.

Measurements.—

Total length	7.76 mm.
Length of head	1.88 mm.
Width of head	1.35 mm.
Length of antennae	1.18 mm.
Length of pronotum	.71 mm.
Width of pronotum	1.29 mm.
Length of hind tibia	.94 mm.

Comparison with other species.—*K. brevicollis* Banks smaller, front smooth. *K. dudleyi* Banks not roughened above, pronotum without anterior points. *K. longicollis* Banks much smaller, shape of head and pronotum entirely different. *K. cavifrons* Banks with smooth top.

Agrees with the description of *K. pseudobrevis* Fuller and is probably the same species.

Type locality.—Jamaica.

New localities.—British Guiana: Georgetown, Penal Settlement, Kartabo.

Range (not well established).—Mexico, Central America, West Indies, Colombia, British Guiana, Brazil.

The description is based upon numerous winged imagos and a soldier from

a single colony collected by the author in Georgetown. Several other winged imagos from the Penal Settlement and Kartabo agree with the Georgetown specimens. I am not certain that this is *Kaloterme brevis* Walker, because no adequate description of either the imago or soldier has ever been published. The British Guiana specimens, however, agree with specimens from the West Indies, the soldier of which has been figured by Banks and Snyder (1920), and which they refer to *K. brevis*. I am also of the opinion that this is the same species described by Fuller, 1921, as *Cryptoterme pseudobrevis* and if the name *brevis* is discarded, Fuller's name should be applied to this species.

Kaloterme (Cryptoterme) verruculosus, sp. nov.

(Fig. 30)

Imago.—Head reddish yellow. Antennae with the 3d segment shorter than the 2d, the 2d equal to the 4th. Eyes .192 mm. from the lower margin of the head.

There seems to be little difference between this species and *K. brevis* except in size.

Measurements.—

(The measurements of the winged specimens were taken from individuals not associated with the queen and soldier types.)

Length with wings.....	9.45 mm.
Length without wings.....	4.73 mm.
Length of head.....	1.12 mm.
Width of head.....	.96 mm.
Length of pronotum.....	.51 mm.
Width of pronotum.....	.87 mm.
Length of hind tibia.....	.71 mm.
Length of anterior wing.....	6.85 mm.
Width of anterior wing.....	1.89 mm.
Length of queen.....	4.82 mm.

Comparison with other species.—No distinct difference exists between this species and *K. brevis* except in size. *K. infumatus* Banks has different wing venation. *K. brevicollis* Banks is smaller. *K. dudleyi* Banks is larger.

Soldier.—Head black in front, reddish yellow brown in back; a few bristles at the back of the head; shape similar to *K. brevis* but differs in the top of the head not being indented so strongly and not as tuberculate. Forehead tuberculate; profile not as straight as *K. brevis*.

Antennae pale, 11–12 segmented; 3d and 4th segments equal and very short, 2d as long as the 2d and 4th together.

Eyes visible in back of the antennae bases.

Mandibles black and short.

Pronotum same color as back of head; front margin emarginate with a distinct angle in the middle; anterior angles rounded, not pointed as in *K. brevis*.

Abdominal tergites yellow.

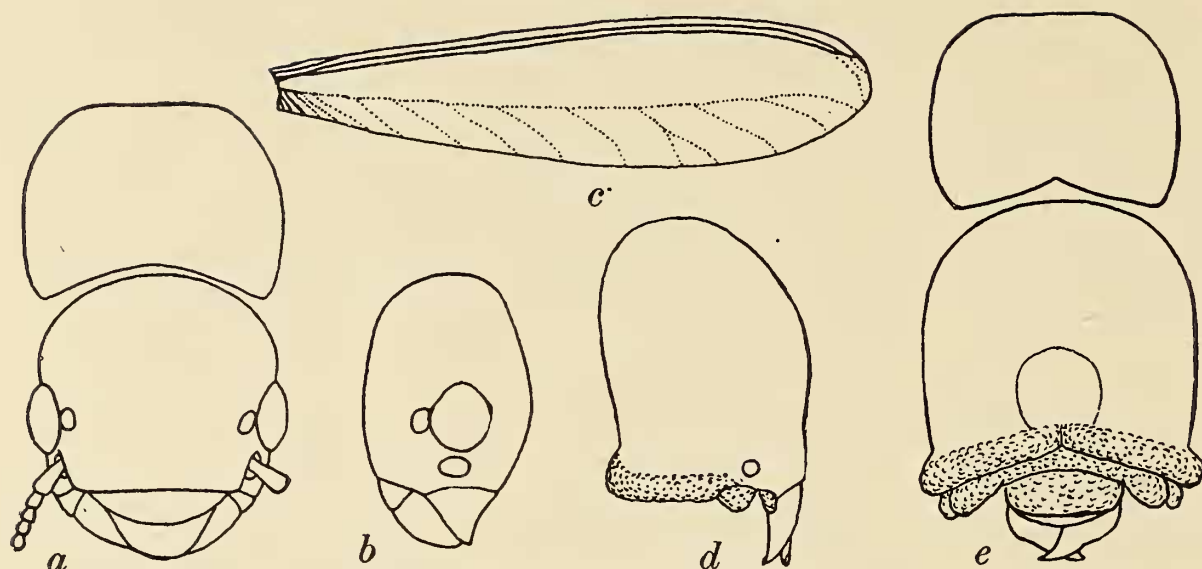


Fig. 31. *Kaloterme (Glyptoterme) pellucidus*, sp. nov. a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, imago, wing.

Kaloterme (Cryptoterme ?) cubicoceps, sp. nov. d, soldier, lateral view of head; e, soldier, dorsal view of head and pronotum.

Measurements.—

Total length	4.50 mm.
Length of head	1.28–1.38 mm.
Width of head	1.03 mm.
Length of antennae	.81 mm.
Length of pronotum (middle)	.58–.61 mm.
Width of pronotum	.96 mm.
Length of hind tibia	.61 mm.

Comparison with other species.—The front angles of the pronotum are more round than in *K. brevis* and the top of the head is not so strongly tuberculate. Heads of *K. dudleyi*, *K. brevicollis*, and *K. longicollis* are not so tuberculate on top.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Soldier.

Morphotype.—Queen.

Described from one queen and six soldiers from two different colonies. A single winged imago taken separately seems to agree with the queen, so the measurements are added.

***Kaloterme (Cryptoterme ?) cubicoceps*, sp. nov.**

(Fig. 31, d, e)

Soldier.—Head yellow brown, front black; only 2 or 3 bristles on head; shape short and thick, front concave with a thick ridge between the front and top and the front and sides. Front with 2 pairs of short rounded projections, one on each side of the base of the mandible and one on each side of the clypeus. Top of head concave near the front, rest smooth and convex; ridge between

the top and front deeply indented in the middle; ridges and front tuberculate.

Antennae yellow; with 12 segments; 3d segment shorter than the 4th, 4th shorter than the 2d.

Eyes practically invisible, same color as the head.

Mandibles short and black.

Pronotum yellow brown with numerous bristles; anterior margin widely emarginate, sides rounded, posterior margin nearly straight; angles between anterior margin and sides rounded.

Abdominal tergites pale with numerous bristles. Styli present, not rudimentary.

Measurements.—

Total length	5.88 mm.
Length of head	2.65 mm.
Width of head	2.12 mm.
Length of antennae	1.53 mm.
Length of pronotum	1.23 mm.
Width of pronotum	1.88 mm.
Length of hind tibia	1.25 mm.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Soldier.

Described from a single soldier collected by the author in a dead liana stem at Kartabo. When collected I thought that it belonged to a colony of the species I am describing as *Kaloterme* (*Glyptoterme*) *pellucidus*, n. sp. although I did not see it with any termites. As the imago, however, has the characteristics of the subgenus *Glyptoterme* and the soldier does not, I think that they must be separate species.

This soldier differs from Holmgren's description of the subgenus in that the styli are distinct and are not rudimentary.

Subgenus *Glyptoterme* (Froggatt)

The characteristics of a number of South American species agree with this subgenus and I am therefore referring them to *Glyptoterme*. Species belonging to *Glyptoterme* have been reported from the Australian, Oriental and Ethiopian regions. I also believe that *K. taurocephalus* Silv., *K. temnocephalus* Silv., and *K. triceromegas* Silv. belong to this subgenus, all three reported from South America. Counting the new species described in this report, there are now twenty-seven species known belonging to this subgenus. They are distributed as follows:—Australian Region seven, Oriental Region eight, Neotropical Region eight, Madagascar and adjoining islands two, Africa one, unknown habitat one.

***Kaloterme* (*Glyptoterme*) *pellucidus*, sp. nov.**

(Fig. 31, a, b, c)

Imago.—Head brownish yellow; widely oval; clothed with a few hairs.

Antennae with 13 segments, the 2d, 3d and 4th equal.

Eyes of medium size, nearly $\frac{3}{4}$ their diameter from the lower margin of the head.

Ocelli small, in contact with the eyes.

Pronotum brownish yellow; clothed with a few hairs; slightly narrower than the head, sides depressed and rounded, posterior margin nearly straight.

Femora of legs somewhat enlarged, pulvillus present.

Wings hyaline; subcosta joining costal margin about $\frac{1}{11}$ the length of the wing from the base; radius parallel to the costal margin, with no branches except near the tip; media usually coalescing with the radius in at least one forewing, usually for a distance of about $\frac{1}{5}$ the length of the wing from the base and then running parallel to the radius for the rest of the length of the wing. The subcosta, radius, and media distinct; the cubitus indistinct with 13-16 branches.

Abdominal tergites brownish yellow, with a few hairs.

Measurements.—

Length with wings	7.00-8.00 mm.
Length without wings	4.41-4.70 mm.
Length of head	1.06-1.12 mm.
Width of head	.88- .94 mm.
Length of antennae	1.00-1.05 mm.
Diameter of eye	.27- .29 mm.
Length of pronotum	.52- .53 mm.
Width of pronotum	.82- .85 mm.
Length of anterior wing	5.76-5.88 mm.
Width of anterior wing	1.59-1.63 mm.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality

Holotype.—Winged imago.

The description is based upon eight winged imagos and two dealated specimens which were found at different times, the winged forms in every case flying to lights singly. The dealated specimens, together with several nymphs, were found in a dead liana stem from which the single specimen of *K. cubicocephus* was taken. They were not seen together, and as the soldier shows a close relationship to *Cryptotermes* and the imago compares well with the winged imagos which have the characteristics of *Glyptotermes*, I have described them separately. However, it is possible that they are the same species.

***Kalotermes (Glyptotermes) perparvus*, sp. nov.**

(Fig. 32)

Imago.—Head dark brown with a few bristles; suboval, relatively thick; Y-suture present; two round muscle insertions half-way between the ocelli and clypeus.

Antennae a little lighter than the head, with 11-12 segments, the 2d, 3d, and 4th equal.

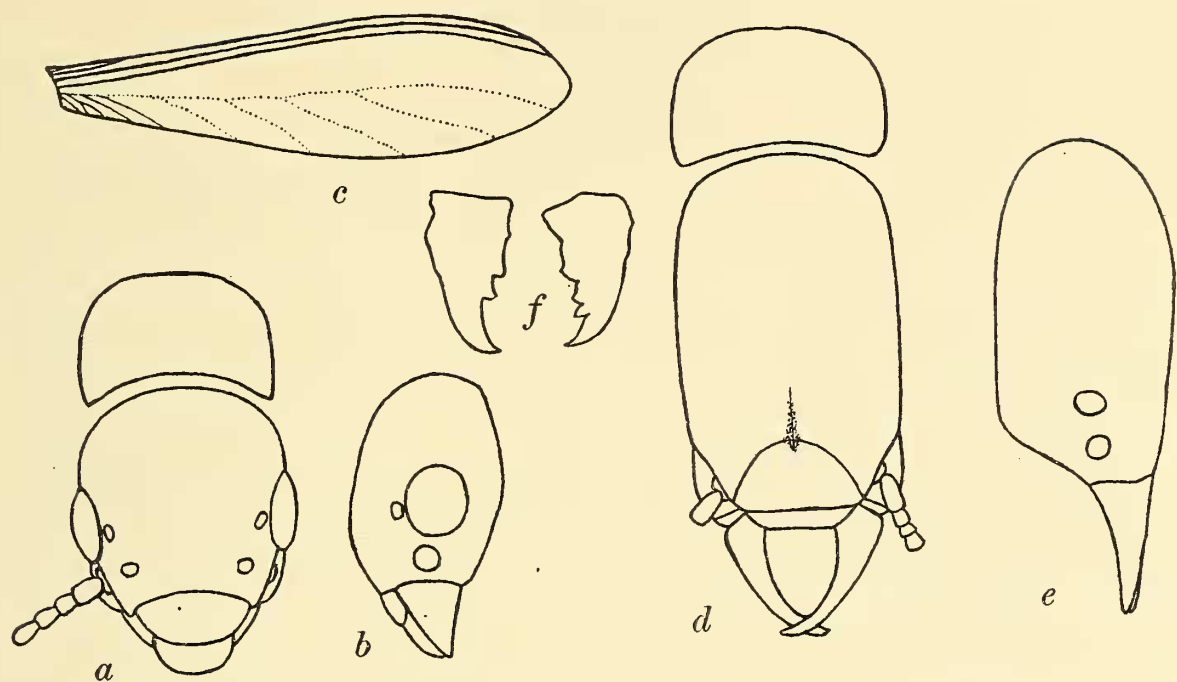


Fig. 32. *Kaloterms (Glyptoterms) perparvus*, sp. nov. a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, imago, wing; d, soldier, dorsal view of head and pronotum; e, soldier, lateral view of head; f, soldier, mandibles.

Eyes medium sized, about $\frac{1}{2}$ their diameter from the lower margin.
Ocelli medium sized, very close to the eyes.
Pronotum dark brown, slightly lighter than the head; clothed with a few bristles; anterior margin rounded, sides somewhat depressed; pronotum a little narrower than the head.
Wings hyaline, the costal border, radius and media dark; membrane stippled, giving a rather dark appearance to the wings; 2 short veins running from the wing suture into the costal border, one distinct, the other barely visible; radius and media parallel, unbranched; outer portion of the cubitus indistinct.
Abdominal tergites dark brown, same color as pronotum; clothed with a few bristles.

Measurements.—

Length with wings.....	5.80–6.47 mm.
Length without wings.....	3.40–4.00 mm.
Length of head.....	.86– .94 mm.
Width of head.....	.76– .77 mm.
Length of pronotum.....	.47– .51 mm.
Width of pronotum.....	.61– .66 mm.
Length of anterior wing.....	4.40–4.59 mm.
Width of anterior wing.....	1.18–1.20 mm.
Length of queen.....	5.14 mm.
Length of king.....	4.02 mm.

Soldier.—Head dark reddish brown in front, posterior part lighter; clothed with a few short bristles; long, sides straight and parallel, posterior margin rounded; forehead steep but not vertical, front conspicuously lobed.

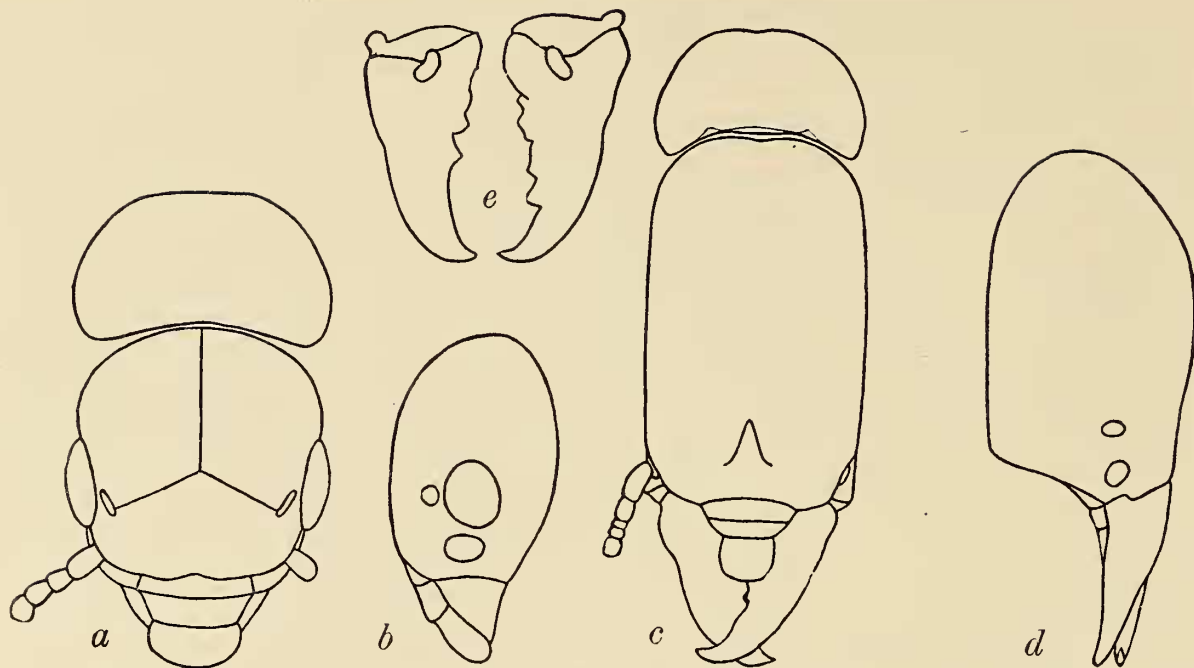


Fig. 33. *Kaloterme (Glyptoterme) guianensis*, sp. nov. a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, soldier, dorsal view of head and pronotum; d, soldier, lateral view of head; e, soldier, mandibles.

Antennae pale yellow, with 10–11 segments.

Eyes unpigmented. Mandibles black, strongly toothed, the right with 2 distinct teeth and the left with 3.

Pronotum same color as back of head, with a number of bristles on the margins but only a few in the middle; anterior margin very slightly emarginate; sides somewhat depressed.

Legs pale yellow, femora stout.

Abdominal tergites with a few short bristles.

Measurements.—

Total length	4.50–4.60 mm.
Length of head	1.59–1.73 mm.
Width of head	.76–.84 mm.
Length of antennae	.75–.86 mm.
Length of pronotum	.40–.42 mm.
Width of pronotum	.76–.77 mm.
Length of left mandible	.57 mm.

Comparison with other species.—The soldier is smaller than *K. temnocephalus* Silv., *K. triceromegas* Silv., and *K. taurocephalus* Silv.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Winged imago.

Morphotype.—Soldier.

Described from many specimens of each caste taken from six different colonies at Kartabo by the author.

Kalotermes (Glyptotermes) guianensis, sp. nov.

(Fig. 33)

Imago.—Head medium light brown; widely oval, widest behind the eyes (eye not included); clothed with numerous bristles.

Antennae pale (broken in specimen).

Eyes large, nearly ½ their diameter from the lower margin of the head.

Pronotum same color as the head; a little narrower than the head; sides rounded, posterior margin slightly rounded; clothed with numerous bristles.

Abdominal tergites same color as the head, clothed with numerous bristles.

Measurements.—

Length of head.....	1.38 mm.
Width of head.....	1.30 mm.
Length of pronotum.....	.69 mm.
Width of pronotum.....	1.05 mm.
Length of queen.....	6.40 mm.

Comparison with other species.—Very close to *K. taurocephalus* Silv., and may possibly be that species.

Soldier.—Head brownish yellow, darker in front; long, sides straight and parallel; forehead steep but not vertical, rather deeply lobed; clothed with a few bristles.

Antennae brownish yellow, with 11 or 12 segments.

Eyes unpigmented. Mandibles brownish black, fairly long and powerful; left with many teeth, right with teeth only on basal half.

Pronotum brownish yellow with a few bristles; about the same width as the head; sides rounded, posterior margin very slightly emarginate.

Abdominal tergites with a few bristles.

Measurements.—

Total length.....	5.20–5.59 mm.
Length of head.....	2.52–2.88 mm.
Width of head.....	1.18–1.25 mm.
Length of antennae.....	1.19 mm.
Length of pronotum.....	.59–.70 mm.
Width of pronotum.....	1.18–1.20 mm.
Length of hind tibia.....	.76–.88 mm.
Length of left mandible.....	1.12 mm.

Comparison with other species.—Very close to *K. taurocephalus* Silv., and may possibly be that species. A specimen determined by Holmgren, however, differs in having a little steeper forehead and a little thicker head. The den-
tation of the mandible in Silvestri's figure (1903) seems to be different also. *K. temnocephalus* Silv. is smaller. *K. triceromegas* Silv. according to Silvestri's figure (1903) has a proportionately shorter head.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Soldier.

Morphotype.—Dealated imago.

The description is based on a single dealated imago, the queen of a colony, and fifteen soldiers taken from two different colonies.

***Kalotermes (Glyptotermes) hospitalis* sp. nov.**

(Fig. 34)

Imago.—Head yellow, with numerous bristles; widely oval.

Antennae broken, 3d segment slightly larger than the 4th, 2d about equal to the 3d.

Eyes of medium size, about $\frac{4}{5}$ their diameter from the lower margin.

Ocelli of medium size, close to the eyes.

Pronotum yellow, with numerous bristles; a little narrower than the head; sides converging somewhat toward the rear, posterior margin not emarginate.

Wing scales brown, contrasting somewhat with the pronotum.

Abdominal tergites yellow, with numerous bristles.

Measurements.—

Length of head.....	1.46 mm.
Width of head.....	1.35 mm.
Diameter of eye.....	.31 mm.
Length of pronotum.....	.65 mm.
Width of pronotum.....	1.18 mm.
Length of queen.....	6.47 mm.

Soldier.—Head yellow brown, growing darker toward the front; clothed with numerous bristles; head long, sides straight and parallel; front sloping at an angle of about 45° , slightly lobed.

Antennae lighter than the head, with 11–12, rarely 13, segments; if with 11 segments, the 3d and 4th are equal, if with 12 segments, the 3d is conspicuously shorter than the 2d or 4th.

Eyes unpigmented, oval and small; about their length from the base of the antennae.

Mandibles black, the left with 3 small teeth, the right with 2 small teeth.

Pronotum nearly the same color as the head, with numerous bristles; sides nearly straight; posterior margin nearly straight.

Abdominal tergites with numerous bristles.

Measurements.—

Total length.....	5.88–9.00 mm.
Length of head.....	3.24–3.25 mm.
Width of head.....	1.53 mm.
Length of antennae.....	1.47–1.59 mm.
Length of pronotum.....	.65 mm.
Width of pronotum.....	1.29–1.47 mm.
Length of hind tibia.....	1.12–1.18 mm.
Length of left mandible.....	1.24 mm.

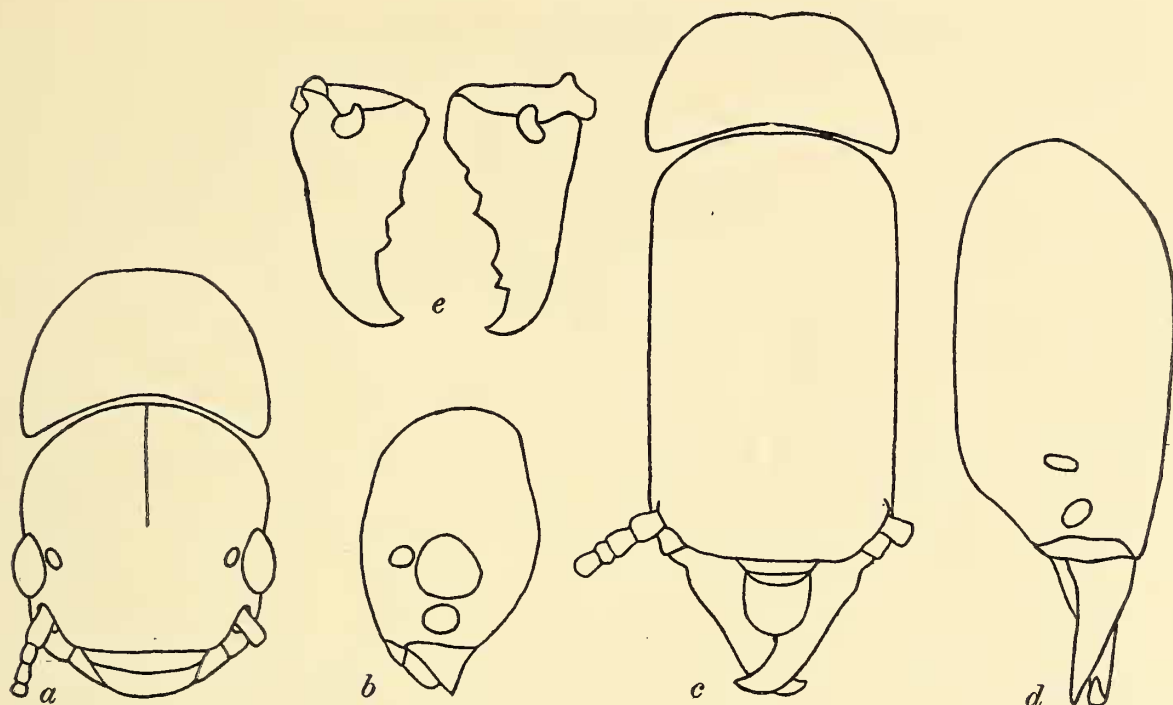


Fig. 34. *Kalotermes (Glyptotermes) hospitalis*, sp. nov. a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, soldier, dorsal view of head and pronotum, d, soldier, lateral view of head; e, soldier, mandibles.

Comparison with other species.—*K. (Neotermes ?) latifrons* Silv. has a shorter and wider head.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Soldier.

Morphotype.—Queen.

Described from one queen and numerous soldiers collected by the author from a single colony at Kartabo. I am not sure that this species belongs to *Glyptotermes* because I have no winged specimen. It seems to come closest to this subgenus, however, so I am tentatively referring the species to *Glyptotermes*.

Subgenus *Lobitermes* Holmgren

Holmgren referred two species to this subgenus, one from Sarawak and the other from Argentine. If the species found at Kartabo is new, as I believe it is, the subgenus is thus represented by three species.

***Kalotermes (Lobitermes) nigriceps*, sp. nov.**

(Fig. 35)

Imago.—Head dark brown, with numerous bristles; widely oval, thick; 2 round muscle insertions above the base of the antennae.

Antennae yellow brown with 13 segments.

Eyes fairly large, .17 mm. removed from the lower margin of the head.

Ocelli of medium size, close to the eyes. Labrum yellow-brown.

Pronotum dark brown with numerous bristles; as wide as the head; posterior margin very slightly emarginate, sides rounded. Pulvillus present.

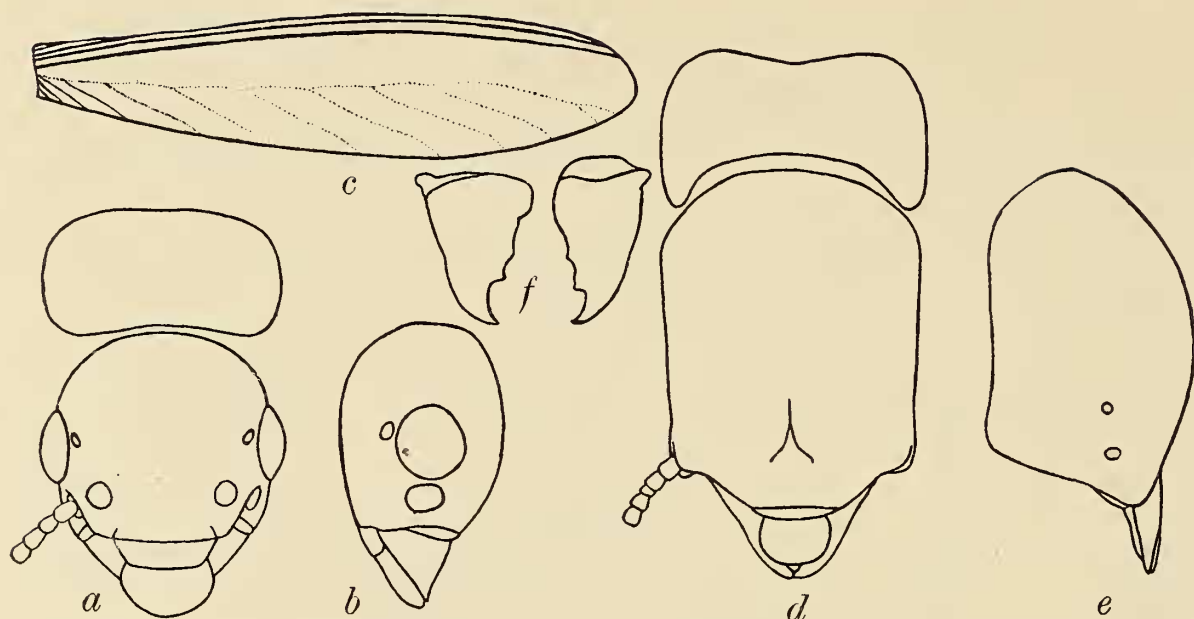


Fig. 35. *Kaloterme (Lobiterme) nigriceps*, sp. nov. *a*, imago, dorsal view of head and pronotum; *b*, imago, lateral view of head; *c*, imago, wing; *d*, soldier, dorsal view of head and pronotum; *e*, soldier, lateral view of head; *f*, soldier, mandibles.

Wings dark; costal margin, radius, and media dark brown, cubitus indistinct; membrane stippled with brown dots. Costal margin ciliated, inner margin not ciliated. Two short veins run into the costal margin, one near the base, the other about $\frac{1}{5}$ the length of the wing from the base; costal margin, radius, and media run parallel without branches.

Abdominal tergites dark brown.

Measurements.—

Length with wings.....	6.82–8.00 mm.
Length without wings.....	4.35–5.20 mm.
Length of head.....	1.10–1.16 mm.
Width of head.....	.94–1.01 mm.
Length of antennae.....	1.55–1.59 mm.
Diameter of eye.....	.26 mm.
Length of pronotum.....	.45–.53 mm.
Width of pronotum.....	.88–.93 mm.
Length of anterior wing.....	5.18–5.30 mm.
Width of anterior wing.....	1.29–1.30 mm.

Comparison with other species.—The imago of *K. lobicephalus* Silvestri has never been adequately described. Holmgren (1911) gives subgeneric characters based upon *K. lobicephalus*, but his photographs do not give specific characters. Holmgren places *C. canellae* Fr. Müller as a synonym of *K. lobicephalus* but Müller's description (1873) is too meagre for determination.

Soldier.—Head entirely black or back of head yellowish brown with the front black; short; forehead nearly vertical and deeply lobed; sides straight and parallel; clothed with a few bristles; no sculpturing visible.

Antennae with 11 segments, the 3d very short, the 2d much longer than the 4th, which is a little longer than the 3d. Antennae yellow with the exception of the 1st and 2d segments.

Eyes visible in back of antennae bases if the head is not entirely black. Labrum nearly as dark as the head.

Mandibles black, short, and strongly toothed

Pronotum yellowish brown with numerous bristles; front margin deeply concave, hind margin widely emarginate, forming a longitudinal constriction in the middle; sides fairly straight, angles rounded.

Legs short; one of the 3 spines on the prothoracic tibia conspicuously larger than the other two; pulvillus absent.

Abdomen rather dull yellow. Sometimes the segments are outlined in black, in which case the head is always entirely black. Tergites with numerous bristles.

Measurements.—

Total length	3.80–4.40 mm.
Length of head	1.60–1.93 mm.
Width of head	1.15–1.24 mm.
Length of antennae	.76–.96 mm.
Length of pronotum (middle)	.39–.41 mm.
Width of pronotum	1.15–1.25 mm.
Length of hind tibia	.64–.67 mm.
Length of left mandible	.61 mm.

Comparison with other species.—Silvestri's description (1903) of the soldier of *K. lobicephalus* does not agree with this species. His measurements are uniformly larger and his figures are entirely different. However, photographs of *K. lobicephalus* in Holmgren (1911) are much closer, although there still seems to be a difference in the shape of the pronotum. The photograph of the soldier shows the hind margin of the pronotum rounded while in *K. nigriceps* it is widely emarginate.

A single soldier from a colony possessing a normal sized king and queen was found to be smaller, the width of the head being 1.03 mm. and other measurements proportionately smaller. I believe, however, that this was a young colony and the soldier was probably hatched from one of the first eggs laid by the queen.

Type locality.—Kartabo, British Guiana.

Other localities.—Barakara, British Guiana.

Range.—British Guiana.

Holotype.—Winged imago.

Morphotype.—Soldier.

Described from many specimens of winged imagos, kings, queens and soldiers collected by the author from six different colonies at Kartabo and one colony at Barakara.

Family RHINOTERMITIDAE Light

Holmgren (1911) divided this family (= Mesotermitidae) into six subfamilies, of which three, Leucotermitinae, Coptotermitinae, and Rhinotermitinae, are found in British Guiana.

Subfamily LEUCOTERMITINAE Holmgren

Holmgren (1911) included a single genus, *Leucotermes*, in this subfamily which he later (1913) divided into two subgenera, *Leucotermes*, s. str. and *Reticulitermes*. Banks (Banks & Snyder, 1920) later raised *Reticulitermes* to generic rank. No species of *Reticulitermes* has yet been recorded from South America except a soldier determined by Wasmann (1902) as a new subspecies of the common North American species, *Reticulitermes flavipes*. This record from Para, Brazil, may have been an introduction of a foreign species, or more likely, was a form of *Leucotermes*, s. str. Only the genus *Leucotermes* has been found in British Guiana.

Genus *Leucotermes* Silvestri

Formerly eight species of this genus have appeared in the literature. Also, there are two species recorded from the genus *Heterotermes* in Australia, the relationships of which seem to be close to *Leucotermes*. Upon examination of series from different parts of South America, Central America, and the West Indies, however, I have come to the conclusion that there are numerous more or less well defined species which have formerly been included under *Leucotermes tenuis* (Hagen). Dr. T. E. Snyder is working on this genus. Including the new species described in this report, the distribution of the genus is as follows:

Oriental region, four; Australian region, two (not including *Heterotermes*); Cocos Islands, one; Neotropical region, two (several more species undescribed).

Leucotermes tenuis (Hagen)

I am convinced that numerous species have been referred to this species in the literature and am therefore not publishing the complete synonymy until the Neotropical forms have been revised by Snyder.

Termes tenuis Hagen (1858), p. 231 (imago), pl. 3, fig. 35 (imago).
Termes tenuis Hagen (1858a), p. 33 (imago).

(Fig. 36, e, f, g)

Imago.—Head rather long, brownish yellow; oval; darker on top than on the sides, fontanelle and 2 pair of muscle insertions in front lighter in color; covered with long hairs.

Antennae with 17 segments, the 3d shorter than the 4th, the 4th shorter than the 2d; yellow.

Eyes rather small, somewhat triangular in shape with the corners rounded; .18 mm. from the lower margin of the head.

Ocelli rudimentary or absent. Labrum and clypeus yellow.

Pronotum covered with long hairs; borders darker than the top of the head,

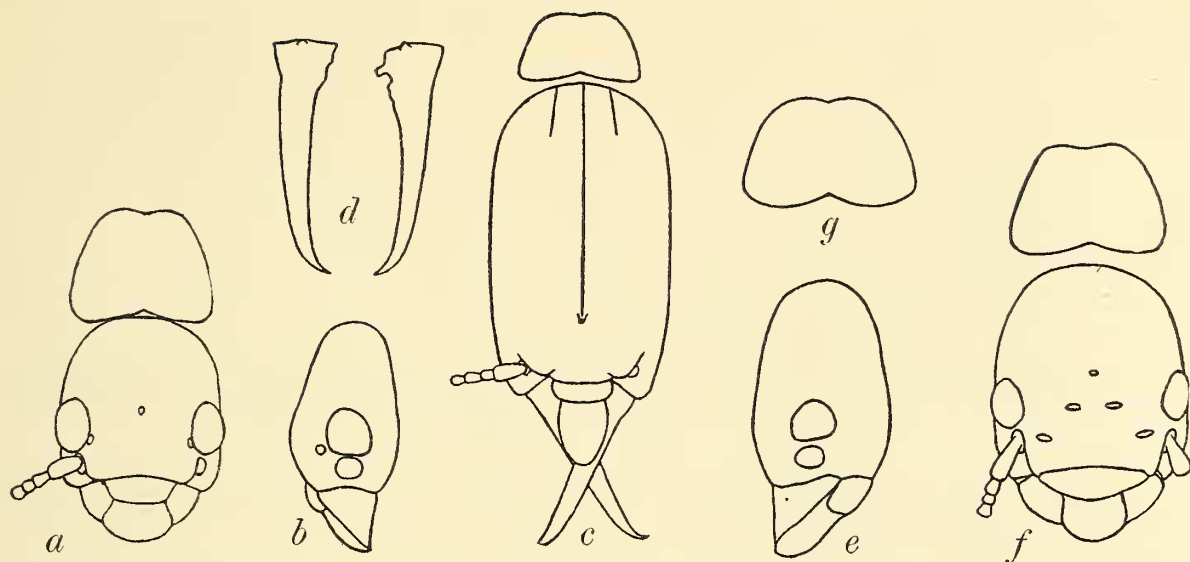


Fig. 36. *Leucotermes crinitus*, sp. nov. a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, soldier, dorsal view of head and pronotum; d, soldier, mandibles.

Leucotermes tenuis (Hagen). e, imago, lateral view of head; f, imago, dorsal view of head and pronotum; g, soldier, pronotum.

the middle about the same color; anterior margin emarginate; sides converging posteriorly; posterior margin slightly emarginate.

In dealated specimens the front wing scales do not meet in the middle and the posterior margin of the mesonotum is clearly visible behind the wing scales. Posterior margins of the meso- and metanota somewhat emarginate. Wings yellow and cloudy. Legs yellow.

Abdominal tergites covered with long hairs, brownish yellow.

Measurements.—

Length with wings.....	10.64 mm.
Length without wings.....	5.32- 6.50 mm.
Length of head.....	1.29 mm.
Width of head.....	1.00- 1.03 mm.
Length of antennae.....	2.09 mm.
Diameter of eye.....	.28 mm.
Length of pronotum.....	.52 mm.
Width of pronotum.....	.80 mm.
Length of hind tibia.....	1.03 mm.
Length of anterior wing.....	8.27 mm.
Width of anterior wing.....	2.13 mm.

Soldier.—Head yellow; long; sides parallel, slightly rounded; head covered with hairs sparsely scattered.

Antennae with 15-17 segments.

Mandibles dark reddish brown; inner margins smooth except near the base, where a few small teeth occur.

Frontal gland visible as a small dark spot in the middle of the forehead.

Pronotum yellow; front margin emarginate, hind margin slightly emarginate; sides and angles rounded; rather sparsely covered with hair. Legs yellow.

Abdomen yellow; tergites rather sparsely covered with hair.

Measurements.—

Total length	5.55–5.91 mm.
Length of head	2.41–2.80 mm.
Width of head	.93–1.07 mm.
Length of antennae	1.61–1.70 mm.
Length of pronotum	.42–.48 mm.
Width of pronotum	.71–.93 mm.
Length of hind tibia	.81–.83 mm.
Length of left mandible	1.16–1.25 mm.

Comparison with other species.—Differs markedly from *L. crinitus* in having fewer hairs on the head of the soldier. The imago has smaller eyes.

Type locality.—Brazil (Hagen's collection at the Museum of Comparative Zoology at Cambridge, Mass.).

New localities.—Kartabo, British Guiana; Dunoon, British Guiana.

Range.—Brazil, British Guiana, Colombia, Panama, West Indies, Bolivia, Peru, Paraguay, Argentina, St. Helena. (It is probable that several species are included in these various records and therefore the range needs accurate revision.)

The description is based on examination of numerous winged imagos and soldiers collected by Mr. John Tee-Van and the author at Kartabo from four different colonies, and from numerous soldiers from a single colony collected by Mr. F. M. Gaige at Dunoon. Dr. T. E. Snyder kindly compared specimens from Kartabo with the type imago from Brazil in the Hagen Collection. Although the type was dried, there seemed to be little doubt that the specimens belong to the same species.

***Leucotermes crinitus*, sp. nov.**

(Fig. 36, *a*, *b*, *c*, *d*)

Imago.—Head yellow, slightly brownish on top; long, oval and high above the eyes, forming a hump; several muscle insertions visible as light dots; fontanelle rather inconspicuous, but visible as a light dot. Head thickly covered with long hairs.

Antennae with 17 segments, 3d slightly smaller than the 4th, 4th shorter than the 2d.

Eyes of medium size, front margin somewhat straight.

Ocelli barely visible as light dots near the eyes.

Pronotum same color as the head; front and hind margins emarginate; sides fairly straight; angles rounded.

Forewing scales nearly touch in the middle, their posterior margins making nearly an even continuous line across the thorax; nearly or just cover the hind margin of the mesonotum; hind margins of meso- and metanota very slightly emarginate. Wings yellow and cloudy. Abdominal tergites yellow.

Measurements.—

Length of head	1.35 mm.
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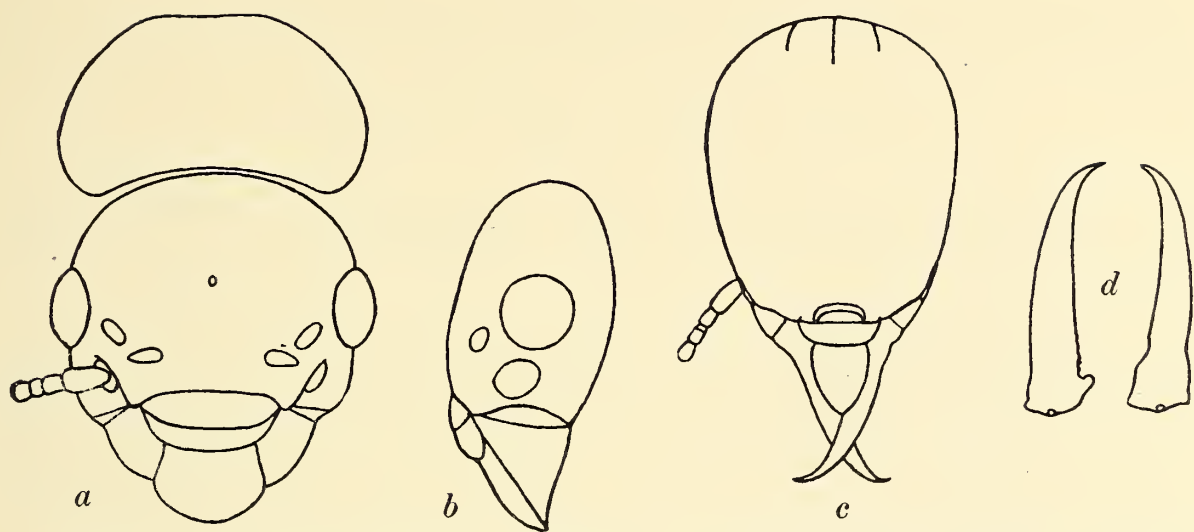


Fig. 37. *Coptotermes marabitanas* (Hagen). *a*, imago, dorsal view of head and pronotum; *b*, imago, lateral view of head; *c*, soldier, dorsal view of head; *d*, soldier, mandibles.

Measurements.—

Width of head.....	1.12 mm.
Length of antennae.....	2.15 mm.
Diameter of eye.....	.32 mm.
Length of pronotum.....	.58 mm.
Width of pronotum.....	.87 mm.
Length of hind tibia.....	1.09 mm.
Length of anterior wing.....	9.10 mm.
Width of anterior wing.....	2.55 mm.

Comparison with other species.—Measurements uniformly larger than in *L. tenuis*. Eye is proportionately larger, pilosity greater and forewing scales form a continuous line across the thorax. The color is also lighter on the head, pronotum and abdomen than in *L. tenuis*.

Soldier.—Very similar to *L. tenuis*, but differs in the head being much more thickly covered with hair. The anterior angles of the pronotum are also much sharper. The soldiers vary somewhat in size.

Measurements.—

Total length.....	6.15 mm.
Length of head.....	2.73 mm.
Width of head.....	1.22 mm.
Length of antennae.....	1.61 mm.
Length of pronotum.....	.39 mm.
Width of pronotum.....	.80 mm.
Length of hind tibia.....	.77 mm.
Length of left mandible.....	1.22 mm.

Type locality.—Kartabo, British Guiana.
Range.—Known only from the type locality.
Holotype.—Winged imago.
Morphotype.—Soldier.

Described from many winged imagos and numerous soldiers collected by the author at Kartabo from four different colonies.

Subfamily COPTOTERMITINAE Holmgren

Holmgren (1911) included two genera, *Prorhinotermes* (= *Arrhinotermes*) and *Coptotermes*, in this subfamily. Only *Coptotermes* has been found in British Guiana.

Wasmann (1902) described the genus *Arrhinotermes* for one species, *A. heimi*, which belongs to *Coptotermes*. Therefore *Arrhinotermes* is synonymous with *Coptotermes* in spite of the fact that another species, *A. oceanicus*, was also included as a species of *Arrhinotermes* by Wasmann. *A. oceanicus* was left without a generic name and as it is a *Prorhinotermes*, a genus described by Silvestri in 1909, it must be included in that genus, although it was not mentioned by Silvestri in his original description.

Genus *Coptotermes* Wasmann

There are twenty-nine species and two varieties of this genus recorded in the literature. These are distributed as follows: Oriental region twelve, Australia and New Guinea nine, Africa and Madagascar four species and two varieties, and South and Central America four. One species, *C. testaceus*, has never been described adequately and may not be valid.

One species was common at Kartabo and does considerable damage to buildings in Georgetown.

Coptotermes marabitanas (Hagen).

Termes Marabitanas Hagen (1858), p. 191 (imago, soldier), pl. 1, fig. 4 (soldier), pl. 3, fig. 25 (imago).

Termes Marabitanas Hagen (1858a), p. 26 (imago).

Coptotermes marabitanas Silvestri (1901), p. 4.

Coptotermes marabitanas Silvestri (1903), p. 46 (imago, soldier, worker), p. 115 (biology), pl. 2, figs. 70-72 (soldier), figs. 73-74 (worker).

Coptotermes marabitanas Desneux (1915), p. 7 (locality).

Coptotermes marabitanas Banks (1918), p. 662 (locality).

(Fig. 37)

Imago.—Head brownish black with long hairs; widely oval; fontanelle small; two large indistinct muscle insertions in front of the ocelli; mandibles yellowish.

Antennae with 19-20 segments, 3d shorter than the 4th, 4th shorter than the 2d.

Eyes small, about $\frac{1}{3}$ their diameter (.13 mm.) from the lower margin of the head.

Ocelli of medium size (.14 mm. long), less than their length from the eyes (.08 mm.).

Clypeus yellowish; posterior portion short; median groove present but no median line visible.

Pronotum brownish black with long hairs, usually narrower than the head but sometimes wider.

Hind margins of meso- and metanota very slightly emarginate; angles rounded.

Wings dark smoky; scales with long hairs; margins of wings ciliated; membrane covered with short hairs; veins rather distinct.

Abdominal tergites brown; sternites yellow to brown.

Measurements.—

Length with wings	13.59–16.00 mm.
Length without wings	7.94– 9.00 mm.
Length of head	1.61– 1.82 mm.
Width of head	1.48– 1.56 mm.
Length of antennae	2.57– 2.94 mm.
Diameter of eye	.38 mm.
Length of pronotum	.81– .96 mm.
Width of pronotum	1.38– 1.51 mm.
Length of hind tibia	1.38 mm.
Length of anterior wing	11.35–11.82 mm.
Width of anterior wing	3.31– 3.56 mm.

Comparison with other species.—Seems to vary considerably in size, proportion of pronotum to head, and color of sternites. I can find no good character to separate this species from Hagen's description of *C. testaceus* and it is possible that they are the same species. *C. marabitanas* is distinguished from *C. niger* Snyder in the ocelli being less than their length from the eye.

Soldier.—Head yellow with sparsely scattered erect bristles; oval, narrowing toward the front.

Antennae pale, with 14 segments.

Labrum with rounded sides; and pointed; widest near the base.

Mandibles red brown, long, pointed; ends curved; the inner edges smooth except near the base. Left mandible with a conspicuous rounded tooth near the base and 4 dentations immediately in front of it. The right mandible with no teeth or dentations.

Gland opening large, near the base of the clypeus.

Pronotum yellow with long bristles on the margins; anterior margin emarginate, posterior margin very slightly emarginate; sides converging toward the rear; angles rounded. Abdomen pale.

Measurements.—

Total length	3.88–6.00 mm.
Length of head	2.09–2.23 mm.
Width of head	1.06–1.20 mm.
Length of antennae	1.77 mm.
Length of pronotum	.35– .48 mm.
Width of pronotum	.53– .77 mm.
Length of hind tibia	.90–1.06 mm.
Length of left mandible	.94– .96 mm.

Comparison with other species.—*C. niger* Snyder is difficult to distinguish from this species.

Type locality.—St. Jose de Marabitanas, Brazil.

New localities.—Upper Wenamu River, Lower Cuyuni River, Dunoon, Georgetown and Kartabo, British Guiana; Port of Spain, Trinidad.

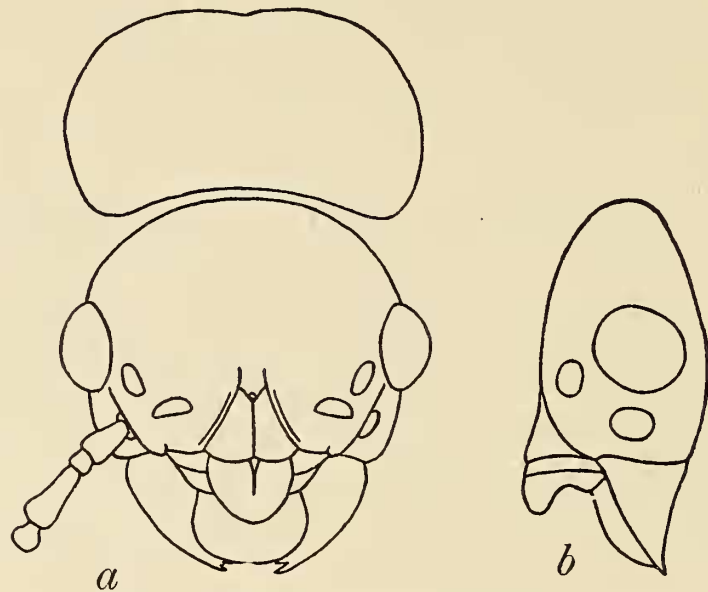


Fig. 38. *Rhinotermes (Rhinotermes) nasutus* (Perty). *a*, imago, dorsal view of head and pronotum; *b*, imago, lateral view of head.

Range.—Brazil, British Guiana, Trinidad, Panama.

Description based upon many winged imagos and many soldiers collected in various localities from numerous colonies as follows: Winged imagos from Upper Wenamu collected by Lavarre, winged imagos from Lower Cuyuni River collected by Lavarre; numerous soldiers and workers collected by F. M. Gaige at Dunoon; many soldiers, winged imagos and workers collected by the author at Georgetown; many winged imagos, soldiers, and workers collected at Kartabo by the author; and numerous soldiers and workers collected at Port of Spain by the author.

Subfamily RHINOTERMITINAE Froggatt

Holmgren (1911) included two genera in this subfamily. Of these two genera one, *Parrhinotermes*, is known from the Oriental and Australian regions only. The other genus, *Rhinotermes*, has a wide distribution and is well represented in British Guiana.

Genus *Rhinotermes* (Hagen)

Holmgren (1911 & 1913) has divided this genus into three subgenera. Of these one, *Schedorhinotermes*, has been raised to generic rank by Silvestri. The subgenus *Macrorhinotermes* is known only from a single species from South-east Borneo. The subgenus *Schedorhinotermes* contains fifteen known species and one subspecies distributed as follows: Oriental region eight, Africa three, and Australian region, including German New Guinea and the Bismarck Archipelago, four species and one subspecies. The subgenus *Rhinotermes*, s. str. is known only from the Neotropical region.

Subgenus *Rhinotermes* Hagen

This subgenus has been known for many years only from two species, *R. marginalis* (L.) and *R. nasutus* (Perty). It was rather surprising, therefore, to find six well defined species at Kartabo, four of which I am describing as new, and two of which I refer to *R. marginalis* and *R. nasutus*. This subgenus is of particular interest because of the remarkable dimorphism exhibited in the soldier caste.

Rhinotermes (*Rhinotermes*) *nasutus* (Perty).

Termes nasutus Perty (1830), p. 127, pl. 25, fig. 10 (imago).

Termes nasutus Hagen (1858), p. 237 (imago), pl. 2, fig. 14, pl. 3, fig. 1 (imago).

Termes nasutus Hagen (1858a), p. 33 (imago).

Rhinotermes taurus Desneux (1904), p. 146 (soldier).

Rhinotermes taurus Holmgren (1906), p. 531 (imago, soldier, worker), text-fig. B (imago), text-fig. C (major soldier), text-fig. D (minor soldier), text-fig. E (worker).

Rhinotermes taurus Holmgren (1909), p. 94 (anatomy), p. 95, fig. 27 (worker), fig. 28 (major soldier), p. 96, figs. 29, 30 (minor soldier).

Rhinotermes (*Rhinotermes*) *nasutus* Holmgren (1911), p. 80 (synonymy), pl. 6, fig. 6 (major soldier), fig. 7 (minor soldier).

Rhinotermes nasutus Holmgren (1912), p. 19, text-fig. 2 (mandibles of major soldier).

(Fig. 38)

Imago.—Head orange yellow with a number of bristles; round; two large conspicuous muscle insertions in front of the ocelli.

Antennae yellow orange; with 20 segments, the 3d very large and long, three times the length of the 2d and conspicuously longer than the 1st, enlarged at the tip.

Eyes rather large, $\frac{1}{4}$ their diameter from the lower margin.

Ocelli rather large, less than their diameter from the eyes.

Clypeus projecting as in other members of this subgenus.

Thorax with numerous bristles. Pronotum orange yellow, nearly as wide as the head; sides rounded; posterior margin slightly emarginate. Posterior margins of meso- and metanota straight.

Wings hyaline, base brownish near the suture; reticulated.

Legs orange yellow. Abdomen orange yellow with numerous bristles.

Measurements.—

Length with wings	18.91 mm.
Length without wings	10.00–11.00 mm.
Length of head	2.47– 2.57 mm.
Width of head	2.28– 2.35 mm.
Length of antennae	3.85 mm.
Diameter of eye	.65 mm.
Length of pronotum	1.25– 1.28 mm.
Width of pronotum	2.12– 2.15 mm.
Length of hind tibia	2.70– 2.73 mm.
Length of anterior wing	14.18 mm.
Width of anterior wing	4.02 mm.

Comparison with other species.—Differs from *R. marginalis* in being lighter

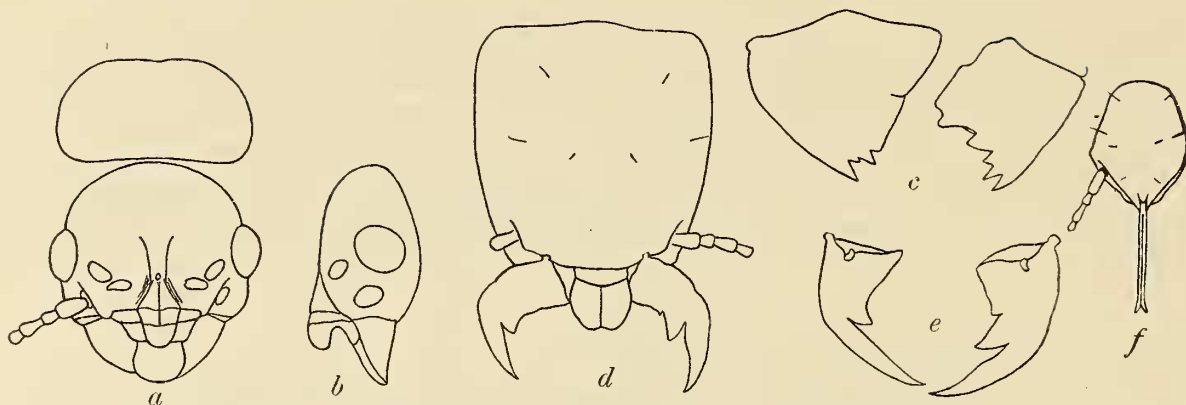


Fig. 39. *Rhinotermes (Rhinotermes) marginalis* (L.) (Hagen). a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, imago, mandibles; d, major soldier, dorsal view of head; e, major soldier, mandibles; f, minor soldier, dorsal view of head.

in color, of larger size, and the 3d segment of the antennae is conspicuously larger than the 1st segment.

Type locality.—Northern Brazil.

New localities.—British Guiana; Issororo, Kartabo.

Range.—Peru, Northern Brazil, Surinam, British Guiana.

Described from three winged imagos, one collected at Issororo, British Guiana, by G. E. Bodkin, the other two collected by the author on different occasions at Kartabo.

Rhinotermes (Rhinotermes) marginalis (Linné) Hagen.

- Hemerobius marginalis* Linnaeus (1758), ed. 10, p. 550; ed. 12, p. 912.
Perla nasuta Degeer (1778), p. 568; ed. Goetze, p. 367; ed. Retzius (1783), p. 60.
Termes nasutum Latreille (1805), p. 69; (1805a), p. 61.
Termes nasutus Burmeister (1839), p. 764.
Termes (Rhinotermes) marginalis Hagen (1858), p. 234 (imago).
Termes marginalis Hagen (1858a), p. 33 (imago).
Rhinotermes marginalis Holmgren (1906), p. 537–539 (imago, minor soldier, worker), text-fig. F (imago).
Rhinotermes marginalis Holmgren (1909), p. 93 (anatomy), p. 94, fig. 25, 26 (imago).
Rhinotermes (Rhinotermes) marginalis Holmgren (1911), pl. 6, fig. 5 (imago).
Rhinotermes marginalis Banks (1918), p. 666 (locality).
Rhinotermes marginalis Banks (1919), p. 480 (major soldier, minor soldier), pl. 1, fig. 1 (major soldier), fig. 5 (minor soldier).

(Fig. 39)

Imago.—Head brown, back of head and around antennae bases lighter; clothed with a few long bristles; round; two large muscle insertions in front of the ocelli.

Antennae with the 3d segment about twice the length of the 2d and about the same length as the 1st, enlarged at the tip.

Eyes fairly large; about $\frac{1}{4}$ their diameter from the lower margin of the head.

Ocelli large, less than their length from the eyes.

Clypeus lighter than the head, conspicuously projecting.

Pronotum a little lighter than the head with an inconspicuous light T-shaped mark in the middle; clothed with numerous bristles; sides rounded, posterior margin very slightly emarginate.

Wings hyaline, not as distinctly pigmented near the suture as in *R. nasutus*; wing membranes and margins entirely free from hairs and pigment spots. Legs yellow.

Abdominal tergites brown, a little darker than the pronotum.

Measurements.—

Length with wings	14.50–15.60 mm.
Length without wings	8.50–10.00 mm.
Length of head	1.90– 2.00 mm.
Width of head	1.90– 1.96 mm.
Diameter of eye	.51– .53 mm.
Length of pronotum	.93– 1.00 mm.
Width of pronotum	1.60– 1.78 mm.
Length of hind tibia	2.40– 2.70 mm.
Length of anterior wing	10.28–11.00 mm.
Width of anterior wing	3.31– 3.41 mm.

Comparison with other species.—The imago is smaller in size and darker in color than *R. nasutus*; the 3d segment of the antennae is about the same length as the 1st and the pronotum is somewhat smaller in proportion to the head.

Major soldier.—Light reddish yellow. Head clothed with a few sparsely scattered bristles; somewhat rectangular, sides somewhat rounded, hind margin slightly bow-shaped.

Antennae with 17 segments, the 3d conspicuously longer than the 2d or 4th, the 4th very slightly longer than the 2d.

Labrum rather wide, rounded at the tip and grooved in the middle.

Mandibles dark red brown with long, sharp, slightly curved points. Left mandible with one large tooth in the middle of the inner edge and a much smaller tooth just behind the first. Right mandible with a single large tooth in the middle of the inner margin.

Pronotum with a few long bristles; sides rounded, hind margin emarginate.

Measurements.—

Total length	6.50 mm.
Length of head	3.37 mm.
Width of head	1.99–2.12 mm.
Length of antennae	2.47 mm.
Length of pronotum	.64 mm.
Width of pronotum	1.28 mm.
Length of hind tibia	1.99 mm.
Length of left mandible	1.41 mm.

Comparison with other species.—The specimens agree with both Holmgren's description of *R. nasutus* and Banks' description of *R. marginalis*.

Minor soldier.—Body entirely reddish yellow. Head with about 8 long bristles scattered over it; widest in the middle; very slightly constricted toward the rear.

Antennae with 15–16 segments (usually 16), the 3d conspicuously longer than the 4th, the 4th slightly longer than the 2d.

Measurements.—

Total length.....	3.78 mm.
Length of head.....	1.54–1.77 mm.
Width of head.....	.67–.70 mm.
Length of antennae.....	2.25 mm.
Length of pronotum.....	.35 mm.
Width of pronotum.....	.55 mm.
Length of hind tibia.....	1.19 mm.

Type locality.—America.

New localities.—British Guiana, Kartabo, Dunoon; Martinique, W. I.

Range.—Peru, Surinam, British Guiana, Martinique, Haiti.

Remarks.—Unfortunately no single colony with imagos, major soldiers, and minor soldiers was found. Therefore I am not absolutely certain that the major soldiers described here belong to the imago. However, minor soldiers found with the imago and minor soldiers found with the major soldiers agree so closely that I feel little doubt that all the castes belong to a single species.

The descriptions are based upon several winged specimens collected by the author at Kartabo; many dealated specimens, some of which were found with young colonies containing workers and minor soldiers of a small size, all collected at Kartabo by the author; many major soldiers from several different colonies collected by the author at Kartabo; many minor soldiers also collected at Kartabo, often with major soldiers; numerous major soldiers collected by F. M. Gaike at Dunoon; and a few major and minor soldiers collected in Martinique by the author.

Rhinotermes (Rhinotermes) hispidus, sp. nov.

(Fig. 40)

Major soldier.—Entire body light reddish yellow. Head covered with bristles, many more than in *R. marginalis*. Head somewhat rectangular; sides nearly straight; hind margin slightly bow-shaped.

Antennae with 16 segments, the 3d conspicuously longer than the 2d, the 2d equal to the 4th.

Labrum proportionately wide, tip rounded, a groove in the middle.

Mandibles dark red brown except at the base. Left mandible with 2 teeth, the 1st larger than the 2d. Right mandible with 2 teeth, the 1st smaller than the 2d, more separated than the teeth of the left mandible.

Pronotum with numerous bristles, sides rounded, hind margin only very slightly emarginate.

Measurements.—

Total length.....	6.15–7.68 mm.
Length of head.....	3.21–3.55 mm.
Width of head.....	1.83–1.96 mm.
Length of antennae.....	2.41 mm.
Length of pronotum.....	.64–.67 mm.
Width of pronotum.....	1.16–1.22 mm.

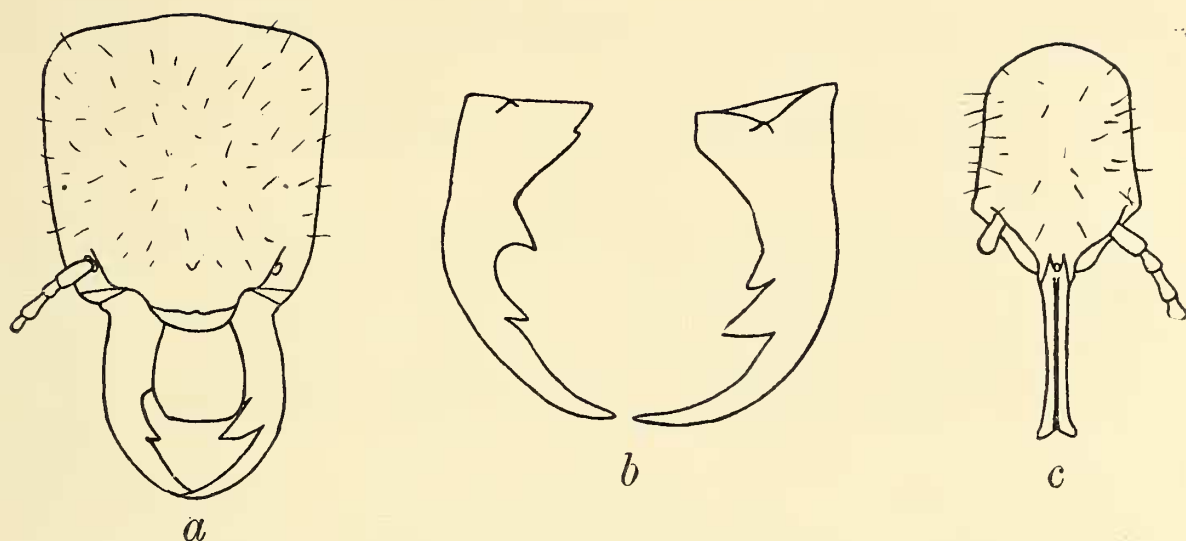


Fig. 40. *Rhinotermes (Rhinotermes) hispidus*, sp. nov. a, major soldier, dorsal view of head; b, major soldier, mandibles; c, minor soldier, dorsal view of head.

Measurements.—

Length of hind tibia.....1.70–1.86 mm.

Length of left mandible.....1.55–1.67 mm.

Comparison with other species.—Differs from *R. marginalis* and *R. nasutus* in the large number of bristles found on the head and the dentation of the mandibles.

Minor soldier.—Head with numerous bristles, many more than in *R. marginalis*. The head is not as constricted toward the rear as in *R. subfusciceps*. Antennae with 15–16 segments (type specimen with 15 segments), the 3d usually not longer than the 2d or 4th. The specimens from different colonies vary considerably, but as the major soldiers do not differ I feel sure that only one species is represented.

Measurements.—

Total length..... 3.90 mm.

Length of head.....1.70–1.93 mm.

Width of head..... .74– .83 mm.

Length of antennae.....1.83–2.41 mm.

Length of pronotum..... .38– .48 mm.

Width of pronotum..... .61– .74 mm.

Length of hind tibia.....1.16–1.28 mm.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Major soldier.

Morphotype.—Minor soldier.

The descriptions are based upon numerous major and minor soldiers collected from two different colonies by the author at Kartabo. Although no soldiers were found with *R. nasutus* and no imagos found with *R. hispidus*,

I hardly think it possible that these are the same species, because the descriptions of the soldiers of *R. nasutus* in the literature are very different from this species.

Rhinotermes (Rhinotermes) longilabius, sp. nov.

(Fig. 41)

Imago.—Head brown, yellow around the base of the antennae; mandibles with dark borders; head clothed with a few long bristles; round; two large conspicuous muscle insertions in front of the ocelli. Fontanelle small, on a line between the ocelli. Front of head raised to meet the base of the clypeus; several dark wrinkles sloping away from in front of the fontanelle.

Antennae yellow, with 20 segments, the 2d, 3d, and 4th about equal in length.

Eyes rather large, $\frac{2}{5}$ their diameter from the lower margin of the head.

Ocelli small, less than their diameter from the eyes.

Clypeus yellow, prolonged above the labrum, proportionately wide at the base; a groove extending along the median line.

Pronotum brown with a light T-shaped mark in the middle; same width as the head; clothed with a few long bristles.

Posterior margins of the meso- and metanota nearly straight.

Wings dark and reticulated.

Abdominal tergites brown. Sternites yellow tinged with brown. Tergites with many bristles.

Measurements.—

Length with wings	8.00– 8.50 mm.
Length without wings	5.50– 5.80 mm.
Length of head	1.29– 1.50 mm.
Width of head	1.28– 1.29 mm.
Length of antennae	2.35 mm.
Diameter of eye	.29 mm.
Length of pronotum	.50– .59 mm.
Width of pronotum	1.06– 1.07 mm.
Length of anterior wing	5.36– 5.59 mm.
Width of anterior wing	1.85– 2.00 mm.
Length of queen	12.50 mm.

Comparison with other species.—Differs from *R. tenebrosus* in the lighter colored sternites and the conspicuous T-shaped mark on the pronotum.

Major soldier.—Head yellow with numerous bristles, broadest in back.

Antennae pale, with 16 segments, the 3d slightly longer than the 2d or 4th.

Labrum elongated, nearly reaching the tip of the mandibles; tip slightly emarginate.

Mandibles large. Left mandible with 2 large pointed teeth, the 2d somewhat smaller than the 1st, a very small 3d tooth also visible near the base. Right mandible with one large double pointed tooth, the 1st point on the anterior side and the 2d point at the apex of the tooth; a 3d microscopic tooth is also present nearer the base.

Pronotum yellow, with numerous bristles. Legs pale. Abdomen yellow.

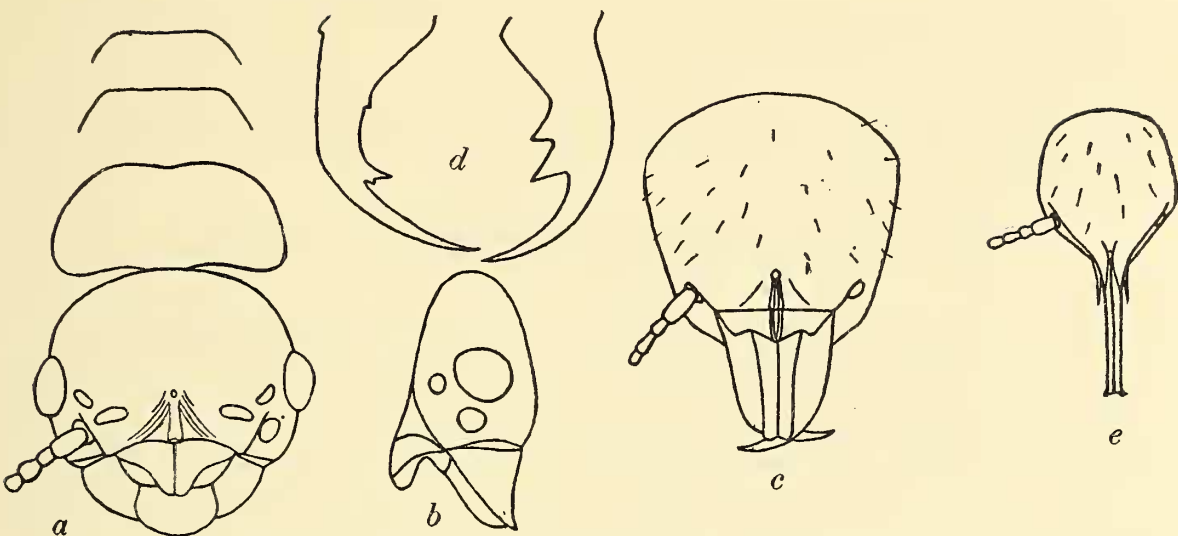


Fig. 41. *Rhinotermes (Rhinotermes) longilabius*, sp. nov. a, imago, dorsal view of head, pronotum and margins of thoracic nota; b, imago, lateral view of head; c, major soldier, dorsal view of head; d, major soldier, mandibles; e, minor soldier, dorsal view of head.

Measurements.—

Total length.....	3.65–4.10 mm.
Length of head.....	1.65–1.76 mm.
Width of head.....	1.06–1.10 mm.
Length of antennae.....	1.53–1.55 mm.
Length of pronotum.....	.35– .38 mm.
Width of pronotum.....	.65– .66 mm.
Length of hind tibia.....	.65– .76 mm.
Length of left mandible.....	.70– .75 mm.

Comparison with other species.—Easily distinguished from *R. tenebrosus* by the difference in the dentation of the mandibles and the yellow color.

Minor soldier.—Head, thorax, and abdomen yellow, legs and antennae pale. Head, thorax and abdomen with numerous bristles. Head widest behind the antennae; posterior margin rounded. Labrum elongated, narrow, forked at the tip. Mandibles vestigial. Antennae with 14 segments (specimen from a young colony with 12 segments).

Measurements.—

Total length.....	2.35–3.50 mm.
Length of head.....	1.10–1.12 mm.
Width of head.....	.53 mm.
Length from the tip of the labrum to the fontanelle.....	.53 mm.
Length of antennae.....	1.28–1.29 mm.
Length of hind tibia.....	.45– .59 mm.
Length of pronotum.....	.22– .23 mm.
Width of pronotum.....	.40– .41 mm.

Type locality.—Kartabo, British Guiana.
Range.—Known only from the type locality.

Holotype.—Major soldier.

Morphotype.—Winged imago.

The descriptions are based on many specimens of each caste collected from twelve different colonies at Kartabo by the author.

***Rhinotermes (Rhinotermes) tenebrosus*, sp. nov.**

(Fig. 42)

Imago.—Head dark brown with numerous long bristles; broadly oval.

Antennae yellow with 20 segments, the 2d equal to the 3d, the 3d a little larger than the 4th.

Eyes of medium size, about $\frac{1}{2}$ their diameter from the lower margin.

Ocelli small, slightly larger than the fontanelle, a little more than their length from the eyes.

Tip of clypeus yellow, projecting; rounded at the tip.

Pronotum dark brown, margin with numerous long bristles; much narrower than the head, sides rounded, posterior margin slightly emarginate. Legs yellow.

Wings dark smoky, lacking marginal cilia; media and cubitus indistinct, merged with irregular thickenings to form a reticulate pattern.

Abdominal tergites dark brown with many bristles. Sternites brown, contrasting strongly with yellow thorax and legs.

Measurements.—

Length with wings.....	8.53–8.82 mm.
Length without wings.....	5.00–5.88 mm.
Length of head.....	1.29–1.35 mm.
Width of head.....	1.18–1.24 mm.
Length of antennae.....	2.35–2.41 mm.
Diameter of eye.....	.24 mm.
Length of pronotum.....	.59 mm.
Width of pronotum.....	.93–1.00 mm.
Length of hind tibia.....	1.45 mm.
Length of anterior wing.....	5.88–6.06 mm.
Width of anterior wing.....	1.82 mm.

Comparison with other species.—This species can be distinguished from *R. longilabius* by the dark sternites, the pronotum being proportionately smaller than the head, and the T-shaped mark on the pronotum is not as conspicuous as in *R. longilabius*.

Major soldier.—Head brown, covered with numerous erect bristles; longer than broad, a little wider behind than in front; posterior margin rounded.

Antennae pale, with 16 segments, the 3d longer than the 2d or 4th. Labrum narrow and elongate reaching at least $\frac{2}{3}$ the length of the mandibles, rounded at the tip.

Mandibles large and powerful. The left with 2 large teeth rather far apart and a third inconspicuous microscopical tooth near the base; the 1st tooth much larger than the 2d. Right mandible with 2 large teeth and a 3d distinct

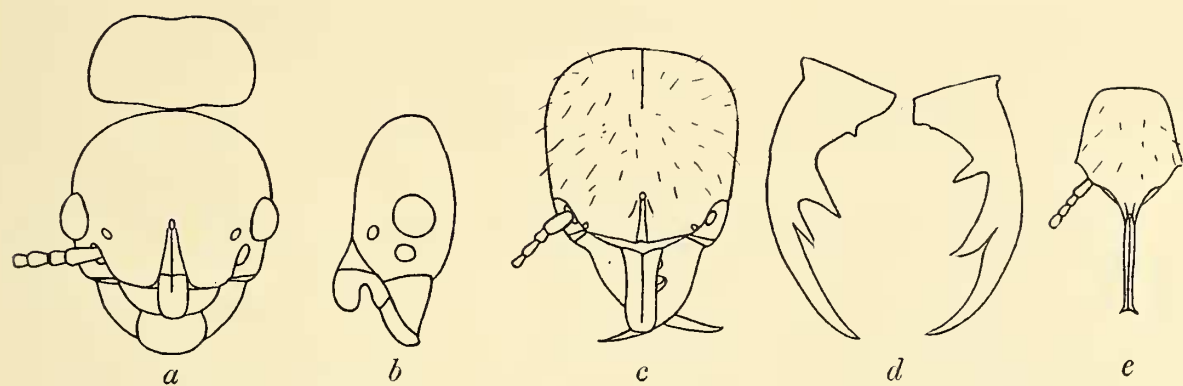


Fig. 42. *Rhinotermes (Rhinotermes) tenebrosus*, sp. nov. a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, major soldier, dorsal view of head; d, major soldier, mandibles; e, minor soldier, dorsal view of head.

small tooth near the base; a rounded angle between the 1st and 2d teeth, the 2d tooth much larger than the 1st.

Pronotum brown, covered with numerous bristles. Legs pale.
Abdominal tergites covered with numerous bristles.

Measurements.—

Total length.....	3.70–5.80 mm.
Length of head.....	1.76–2.03 mm.
Length of head to tip of labrum.....	1.65–1.73 mm.
Width of head.....	1.10–1.12 mm.
Length of antennae.....	1.71–1.82 mm.
Length of pronotum.....	.35–.38 mm.
Width of pronotum.....	.64–.71 mm.
Length of hind tibia.....	1.00–1.12 mm.
Length of left mandible.....	.95–1.00 mm.

Comparison with other species.—Easily distinguished from all other known major soldiers by the dentation of the mandibles.

Minor soldier.—Head, thorax, and abdominal tergites brown, with numerous bristles. Legs and antennae pale. Head widest behind the antennae, sides converging toward the rear. Posterior margin of the head rounded. Labrum very elongate, narrow, forked at the tip. Mandibles vestigial. Antennae with 15–16 segments.

Measurements.—

Total length.....	3.43–3.80 mm.
Length of head.....	1.47–1.50 mm.
Width of head.....	.64–.70 mm.
Length of antennae.....	1.71–1.76 mm.
Length of labrum.....	.75–.76 mm.
Length of hind tibia.....	.75–.82 mm.
Length of pronotum.....	.32–.35 mm.
Width of pronotum.....	.42–.53 mm.

Type locality.—Kartabo, British Guiana.
Range.—Known only from the type locality.
Holotype.—Major soldier.
Morphotype.—Winged imago.

The descriptions are based upon many specimens of all the castes collected at Kartabo by the author from six different colonies.

Rhinotermes (Rhinotermes) subfusciceps, sp. nov.

(Fig. 43)

Imago (one queen).—Head reddish yellow, widely oval, with a few long bristles.

Antennae broken, the 3d segments longer than the 2d or 4th and not as long as the 1st, the 2d equal to the 4th.

Eyes of medium size, .13 mm. from the lower margin; oval in shape.

Ocelli of medium size, oval, about their length removed from the eyes.

Clypeus projecting, from the side appearing to be pointed at the tip.

Pronotum reddish yellow with numerous long bristles; sides and posterior margin making nearly a perfect semicircle; posterior margin not emarginate.

Wing scales brownish yellow. Abdomen brownish yellow.

Measurements.—

Length of head.....	1.51 mm.
Width of head.....	1.35 mm.
Diameter of eye.....	.32 mm.
Length of pronotum.....	.67 mm.
Width of pronotum.....	1.06 mm.
Length of queen.....	8.27 mm.

Comparison with other species.—Much smaller than *R. nasutus* or *R. marginalis*. Larger and lighter in color than *R. tenebrosus* or *R. longilabius*.

Minor soldier.—Head golden brown, contrasting somewhat with the abdomen. Head somewhat constricted behind, making the sides concave; widest in front of the middle; clothed with a number of bristles. A tubercle is visible in back of the base of each antenna.

Antennae with 15 segments, the 3d longer than the 2d or 4th and a little enlarged at the tip, the 2d equals the 4th.

Labrum much elongated, thin, forked at the tip; a groove extending down the middle. Mandibles vestigial but visible as sharp points beneath the labrum.

Pronotum nearly the same color as the head, widest portion in the middle; posterior margin not emarginate; front prolonged somewhat into a wide lobe. Abdomen reddish yellow.

Measurements.—

Length of head.....	1.48 mm.
Width of head.....	.65- .68 mm.
Length of antennae.....	1.77 mm.
Length of pronotum.....	.42 mm.
Width of pronotum.....	.51 mm.
Length of hind tibia.....	1.06 mm.

Comparison with other species.—Easily distinguished from all other de-

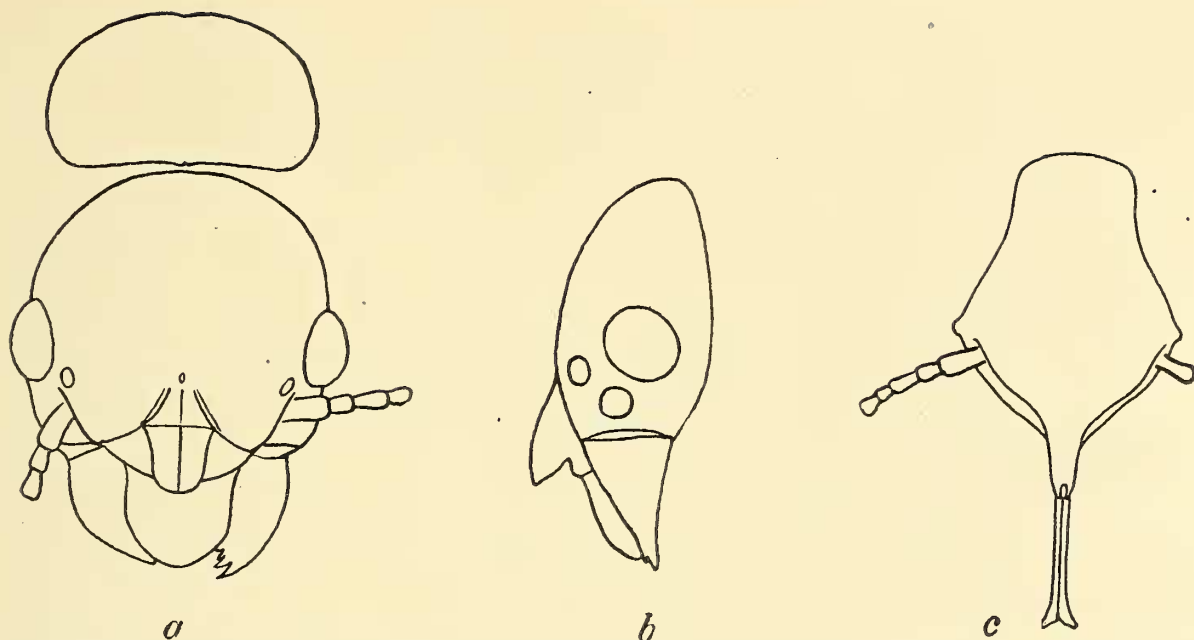


Fig. 43. *Rhinotermes (Rhinotermes) subfusciceps*; sp. nov. a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, minor soldier, dorsal view of head.

scribed minor soldiers of *Rhinotermes* by the color of the head and the constriction in the head.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Queen.

Morphotype.—Minor soldier.

Described from a single queen and many minor soldiers collected by the author at Kartabo from two different colonies. In both cases each colony was thoroughly searched for major soldiers but for some unaccountable reason no specimens of this caste seemed to be present.

Family TERMITIDAE Light

Although Holmgren (1910b) tentatively divided this family (= *Metatermitidae*) into several subfamilies, he later (1912) did not recognize them, but instead divided the whole family into groups of genera. The family as a whole needs further study before well defined subfamilies can be distinguished.

This is by far the largest of the four known families of termites, approximately 75 per cent. of the known species belonging to the Termitidae. It has not been able to spread as far north as the Rhinotermitidae, but is found in all the tropical and subtropical parts of the globe. Banks (Banks & Snyder 1920) combined this family with the Rhinotermitidae into a single family but I feel that the characteristics of the two groups warrant Holmgren's division into families.

Genus *Syntermes* Holmgren

Including the species described in this report, this genus now includes thirteen species, all confined to South America. Of these, three species were found at Kartabo, two of which are new. *S. grandis* (Rambur) has also been reported from British Guiana but was not found by the author.

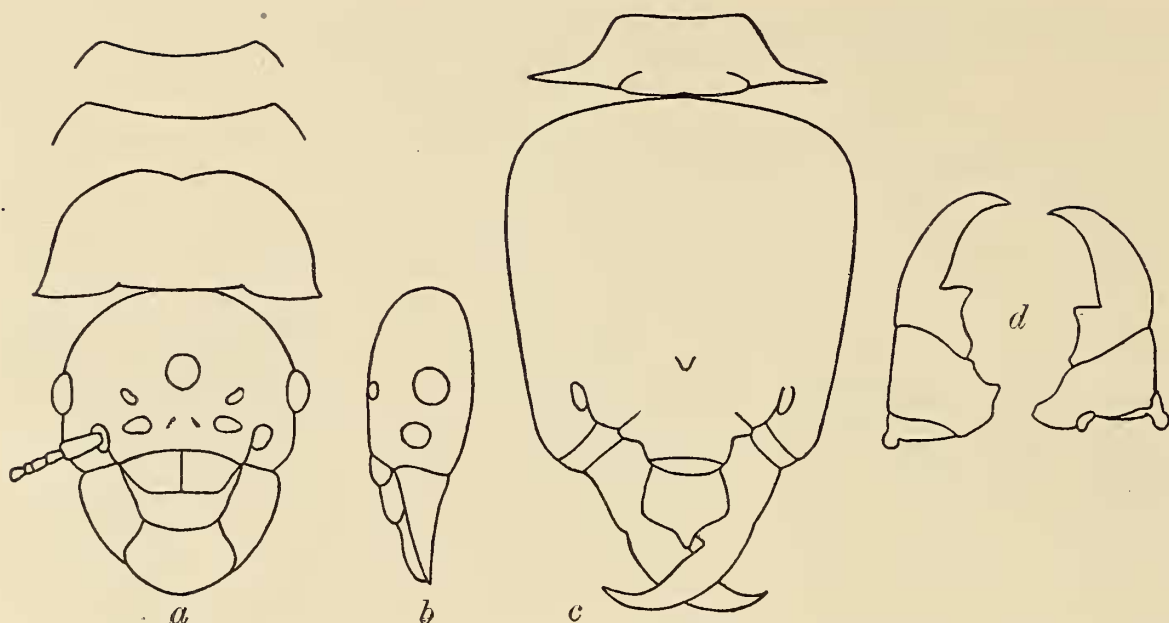


Fig. 44. *Syntermes snyderi*, sp. nov. *a*, imago, dorsal view of head, pronotum and margins of thoracic nota; *b*, imago, lateral view of head; *c*, soldier, dorsal view of head and pronotum; *d*, soldier, mandibles.

***Syntermes snyderi*, sp. nov.**

(Fig. 44)

Imago.—Head orange yellow, clothed with a few short bristles; oval and proportionately thin; fontanelle large and round, its diameter much longer than the ocelli; muscle insertions in front of the ocelli.

Antennae with 19–20 segments. Eyes small, about $\frac{3}{5}$ their own diameter from the lower margin.

Ocelli proportionately small, twice their own length from the eyes.

Posterior clypeus with a faint median line.

Pronotum a little lighter than the head; conspicuously wider than the head; anterior angles sharply pointed; posterior margin emarginate, anterior margin slightly emarginate; margins clothed with short bristles.

Meso- and metanota lighter than the pronotum, yellowish; posterior margins widely concave. Wings dark smoky.

Abdominal tergites dark brown; nearly smooth, with only a few short marginal bristles.

Measurements.—

Length with wings	35.00–40.00 mm.
Length without wings	17.00–21.00 mm.
Length of head	4.77– 4.85 mm.
Width of head	3.84– 3.86 mm.
Length of antennae	5.90 mm.
Diameter of eye	.71 mm.
Length of pronotum	2.01 mm.
Width of pronotum	4.37 mm.

Measurements.—

Length of hind tibia.....	7.09 mm.
Length of anterior wing.....	30.50 mm.
Width of anterior wing.....	7.80 mm.

Remarks.—The angles of the pronotum do not project as far as they do in Hagen's figure of *S. dirus*.

Soldier.—Head brownish to orange yellow, front a little darker; thickly covered with short bristles; widest behind, sides straight.

Antennae darker than the head, with 19 segments.

Labrum with a 3-lobed hyaline point.

Mandibles black, strong, with a large tooth on each mandible (see fig.).

A small frontal tube is present in the middle of the head.

Thoracic nota with long, strong, cylindrical pointed spines, the spine of the pronotum extending out straight and those on meso- and metanota pointed somewhat backward. Pronotum with many short bristles; same color as the head; anterior lobe very slightly emarginate.

Measurements.—

Total length.....	22.00 mm.
Length of head.....	9.10– 9.20 mm.
Width of head.....	6.74– 6.85 mm.
Length of antennae.....	8.19 mm.
Width of pronotum.....	5.79 mm.
Length of hind tibia.....	6.74 mm.
Length of left mandible.....	4.14 mm.

Remarks.—This soldier seems to be larger than the measurements of *S. dirus* given by Holmgren (1911a) in his key. Hagen (1858) states that the length of the soldier of *S. dirus* is 19.00 mm. I believed at first that this termite was *S. dirus*, but Dr. T. E. Snyder compared it with a type at the Mus. Comp. Zool., and states that the teeth on the mandibles differ and *S. snyderi* is larger.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Soldier.

Morphotype.—Imago.

Described from two winged imagos and many soldiers collected by the author from four different colonies at Kartabo. The species is named in honor of Dr. T. E. Snyder. It is probable that the specimens from British Guiana referred to *S. dirus* by Walker (1853) and Hagen (1858a) belong to this species.

***Syntermes territus*, sp. nov.**

(Fig. 45)

Imago.—Head dark brown, oval, proportionately thin; clothed with only a few bristles; four muscle insertions in a row in front of the ocelli. Fontanelle subcircular, about the same length as the ocelli.

Antennae yellow brown with 19–20 segments, the 3d sometimes showing signs of dividing.

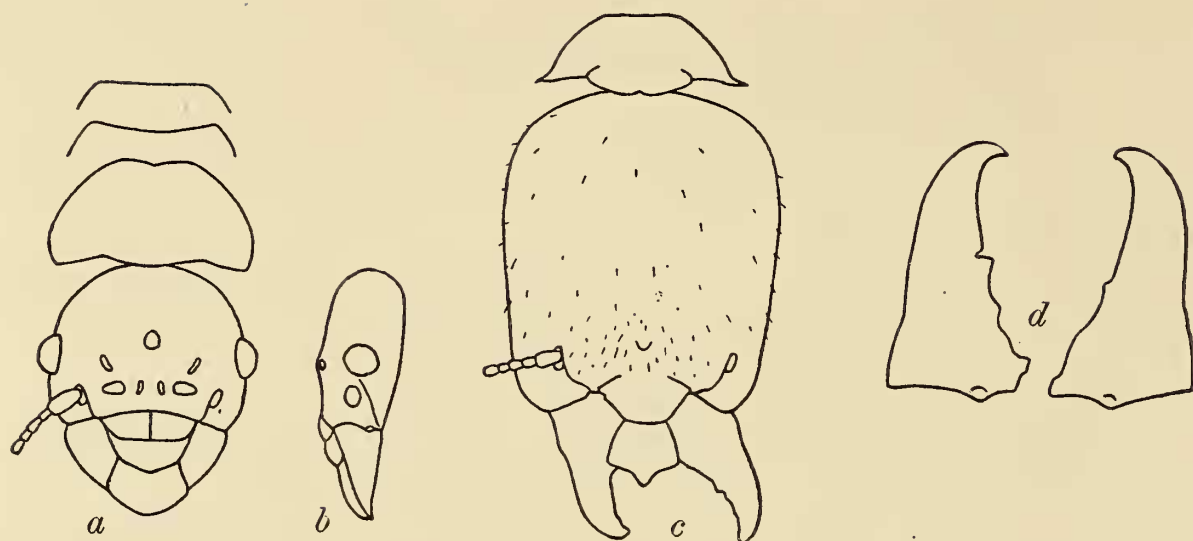


Fig. 45. *Syntermes territus*, sp. nov. a, imago, dorsal view of head, pronotum and margins of thoracic nota; b, imago, lateral view of head; c, soldier, dorsal view of head and pronotum; d, soldier, mandibles.

Eyes small, about $\frac{1}{2}$ their diameter (.29 mm.) from the lower margin of the head.

Ocelli of medium size, nearly twice their length from the eyes. Labrum yellow brown. Posterior clypeus yellow brown with a median line.

Pronotum dark brown, about the same width or slightly narrower than the head; margins hairy. The anterior region of the pronotum somewhat elevated; anterior margin slightly emarginate; anterior angles forming right angles; posterior margin conspicuously emarginate.

Posterior margins of meso- and metanota straight or slightly concave.

Wings dark brown, smoky; veins distinct throughout.

Abdominal tergites dark brown, with short bristles.

Measurements.—

Length with wings.....	32.00–34.00 mm.
Length without wings.....	18.00 mm.
Length of head.....	3.75– 3.78 mm.
Width of head.....	3.24 mm.
Length of antennae.....	5.00 mm.
Diameter of eye.....	.58 mm.
Length of pronotum.....	1.54 mm.
Width of pronotum.....	3.19 mm.
Length of hind tibia.....	4.49 mm.
Length of anterior wing.....	24.50 mm.
Width of anterior wing.....	6.00 mm.

Comparison with other species.—Seems to differ from the descriptions of *S. grandis* in that the wings are not white and transparent. Also Hagen's (1858) measurements are a little smaller.

Soldier.—Head brownish orange yellow, front somewhat darker; sub-rectangular, the sides nearly parallel; sparsely covered with short bristles, conspicuously fewer than on *S. dirus*.

Antennae with 19 segments. Labrum brownish yellow with a 3-lobed hyaline tip.

Mandibles black; left with short teeth, an incision in front of the 1st tooth; 2d tooth very blunt and small; right mandible with a nearly smooth inner edge.

A very small tube is present in the middle of the forehead.

Thoracal nota slightly darker than the head, each with a pair of conspicuous sharp spines on the sides, these being relatively short and small, compared to the spines of *S. dirus*. Pronotum with a few short bristles, anterior portion raised, margin slightly emarginate. Abdominal tergites with a row of bristles on the margins.

Measurements.—

Total length	16.00–17.00 mm.
Length of head	8.27 mm.
Width of head	4.75– 4.96 mm.
Length of antennae	5.32 mm.
Width of pronotum	3.55– 3.63 mm.
Length of hind tibia	4.37 mm.
Length of left mandible	3.19 mm.

Comparison with other species.—Differs from *S. grandis* in the sides of the head being nearly parallel. The mandibles are more curved than in *S. silvestrii* and the right mandible has a nearly smooth inner margin. *S. territus* must be close to *S. bolivianus* but Holmgren's (1911a) description is too meagre to be sure of the relationship of these species.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Soldier.

Morphotype.—Winged imago.

Described from numerous specimens collected by the author at Kartabo from five different colonies.

Syntermes parallelus Silvestri.

Syntermes parallelus Silvestri (1923), p. 318 (imago, soldier, major worker minor worker), pl. XV (imago, soldier, worker).

(Fig. 46)

Imago.—Head dark brown, oval. Fontanelle lighter than head, larger than ocelli. Four muscle insertions in a line in front of the ocelli.

Antennae with 19 segments, the 2d a little smaller than the 3d and much longer than the 4th (Silvestri).

Eyes proportionately small, a little less than $\frac{1}{2}$ their width from the lower margin. Ocelli proportionately small, twice their length removed from the eyes.

Postclypeus a little lighter than the head; with median line.

Pronotum lighter and nearly as wide as the head; anterior angles rather sharp, posterior margin emarginate.

Posterior margins of the meso- and metanota widely concave.

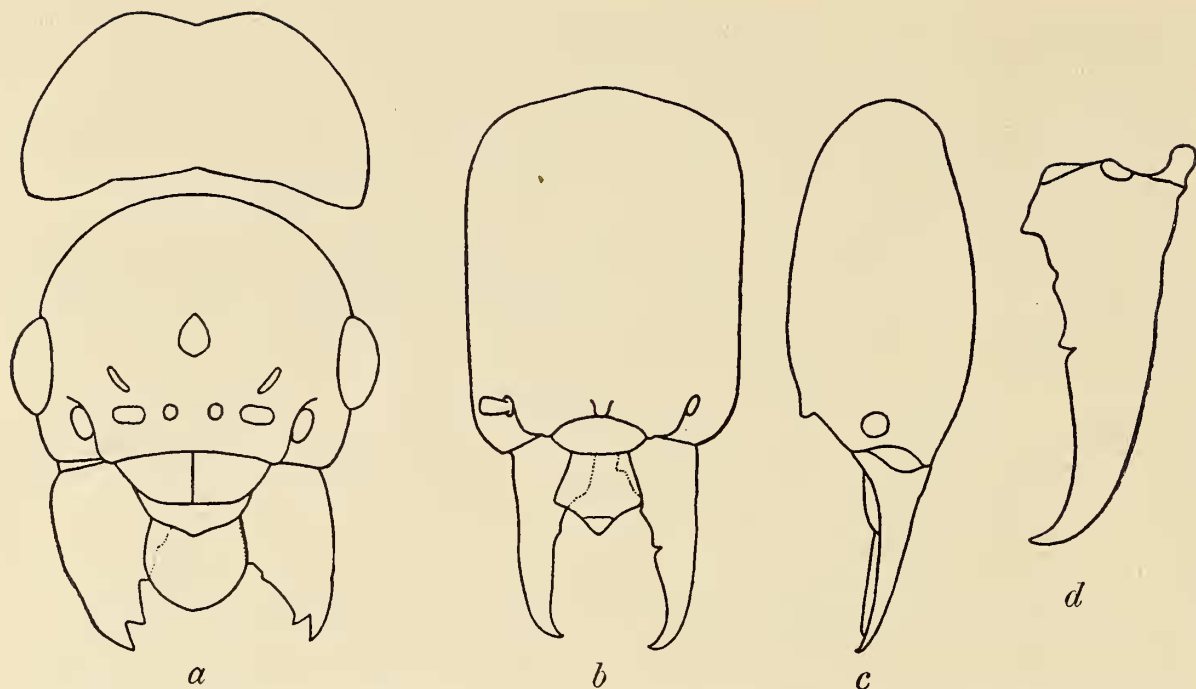


Fig. 46. *Syntermes parallelus* Silvestri. *a*, imago, dorsal view of head and pronotum; *b*, soldier, dorsal view of head; *c*, soldier, lateral view of head; *d*, soldier, left mandible.

Wings smoky, membrane covered with small hairs.

Abdominal tergites almost as dark as the head.

Measurements.—

Length with wings	29.00 mm. (Silv.)
Length without wings	17.00 mm. (Silv.)
Length of head	3.67 mm.
Width of head	3.15 mm.
Length of antennae	5.00 mm. (Silv.)
Diameter of eye	.57 mm.
Length of ocellus	.27 mm.
Length of pronotum	1.17 mm.
Width of pronotum	2.93 mm.
Length of hind tibia	4.00 mm. (Silv.)
Length of anterior wing	24.50 mm. (Silv.)
Width of anterior wing	5.80 mm. (Silv.)

Soldier.—Head brownish yellow, covered with short hairs; sides straight and almost parallel. A short frontal tube in the middle of the forehead.

Antennae with 19 segments (Silvestri).

Mandibles black. Left with an indentation about $\frac{1}{2}$ the length of the mandibles and several rounded teeth at the base. Right with a small obtuse tooth about $\frac{2}{5}$ the length of the mandible from the base.

Thoracic nota with a rather short spine on each lateral margin.

Measurements.—

Total length	12.00 mm. (Silv.)
Length of head	6.34– 6.80 mm.

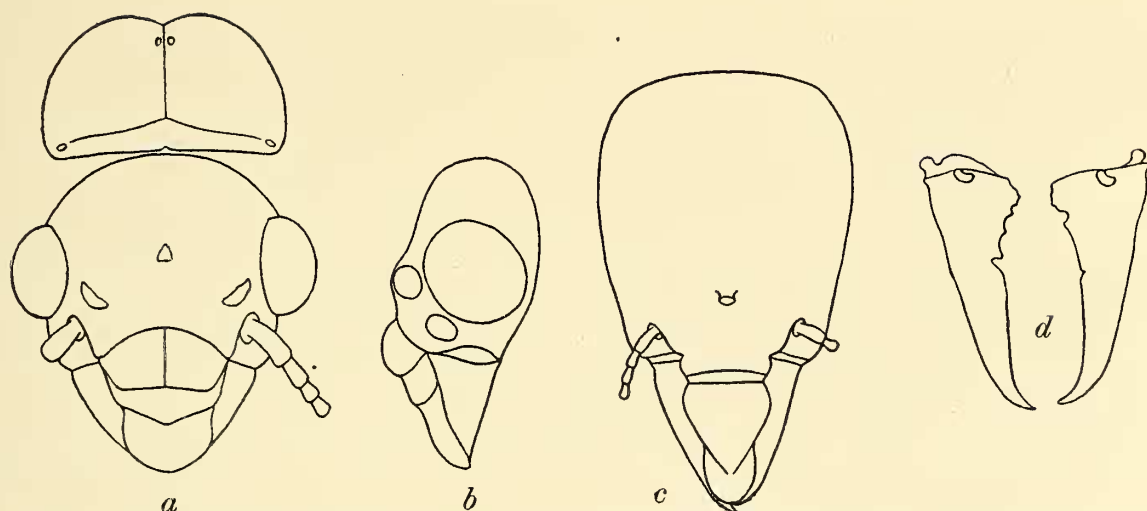


Fig. 47. *Cornitermes (Labiatermes) labralis* Holmgren. *a*, imago, dorsal view of head and pronotum; *b*, imago, lateral view of head; *c*, soldier, dorsal view of head; *d*, soldier, mandibles.

Measurements.—

Width of head.....	2.97–3.15 mm.
Length of antennae.....	4.60 mm. (Silv.)
Length of hind tibia.....	3.00 mm. (Silv.)
Length of left mandible.....	2.45 mm.

Type locality.—Canister Falls (Demerara River), British Guiana.

New locality.—Kartabo, British Guiana.

Range.—British Guiana.

The description is based upon several soldiers and three imagos found in the stomach contents of *Bufo typhonius* at Kartabo. The specimens were not in good condition and therefore a number of measurements and some of the description is taken from Silvestri's (1923) original description.

Genus *Cornitermes* Wasmann

Holmgren (1912) divided this genus into two subgenera, both of which have representatives in British Guiana.

Subgenus *Labiatermes* Holmgren

There are six known species belonging to this subgenus, two of which are reported from the Belgian Congo, and the other four species are Neotropical. A single species was found at Kartabo, which I refer to *C. labralis* Holmgren described from specimens collected in Peru.

Cornitermes (Labiatermes) labralis Holmgren.

Cornitermes labralis Holmgren (1906), p. 553 (imago, soldier, worker), text-fig. N (imago), text-fig. O (soldier), text-fig. P (worker); (1909), p. 80 (anatomy), fig. 15 (imago).
Cornitermes (Labiatermes) labralis Holmgren (1912), pp. 50, 51, text-fig. 22 (soldier mandibles).

(Fig. 47)

Imago.—Head dark brown, oval, clothed with a few bristles. Fontanelle white, conspicuous, triangular.

Antennae with 17 segments (perfect in both the king and queen), the 2d much larger than the 3d, the 3d slightly larger than the 4th.

Eyes very large, prominent, and very close to the lower margin of the head.

Ocelli large (.94 mm. long), .24 mm. from the eyes.

Posterior clypeus yellowish brown with a faint median line.

Pronotum same color as the head; front margin straight; sides and posterior angles rounded; hind margin emarginate; clothed with many bristles. Posterior margins of the meso- and metanota widely emarginate.

Wings light yellow brown; costal border and radius dark brown at base and yellow near the tip.

Abdominal tergites brown; sternites yellow.

Measurements.—

Length with wings	20.00–21.00 mm.
Length without wings	10.00–11.00 mm.
Length of head	2.01– 2.13 mm.
Width of head	1.90– 1.96 mm.
Length of antennae	2.80– 3.05 mm.
Diameter of eye	.73– .77 mm.
Length of pronotum	.90– .96 mm.
Width of pronotum	1.56– 1.61 mm.
Length of hind tibia	2.73– 2.89 mm.
Length of anterior wing	16.00–16.80 mm.
Width of anterior wing	4.90– 5.25 mm.
Length of queen	27.00 mm.
Width of abdomen of queen	8.50 mm.
Length of king	8.50 mm.

Remarks.—Holmgren (1906) states that the head of the imago of *C. labralis* is without hair and smooth, but a few bristles on the head were found on specimens from Trinidad.

Soldier.—Head yellow, narrowed in front, sides and posterior margin rounded; a very few short bristles scattered over the head.

Antennae with 15 segments, the 2d equal to the 3d, the 4th shorter than the 3d.

Labrum elongated, subtriangular; tip hyaline, rounded at the end.

Mandibles dark brown, curved only slightly at the tip. Left mandible with an indentation about the middle and a 2d larger indentation near the base. Right mandible with an indentation about the middle and between this and the base are four small blunt teeth.

Short frontal tube with a white tip present in the middle of the forehead.

Pronotum with large bilobed anterior lip, anterior margin conspicuously emarginate, posterior margin evenly curved. Pronotum about the same color as the head. Legs pale.

Abdomen the color of the contents of the intestines.

Measurements.—

Total length	8.86 mm.
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Measurements.—

Length of head	4.02 mm.
Width of head	2.24–2.36 mm.
Length of antennae	2.41 mm.
Length of frontal tube	.16–.19 mm.
Length of pronotum	.87 mm.
Width of pronotum	1.22–1.25 mm.
Length of hind tibia	2.25 mm.
Length of left mandible	1.67 mm.

Comparison with other species.—*C. longilabius* Silvestri is smaller. The dentation of the mandibles of *C. orthocephalus* Silvestri and *C. laticephalus* Silvestri is entirely different.

Type locality.—Chaquimayo, Peru.
New localities.—Kartabo, British Guiana; St. Joseph, Trinidad, W. I.
Range.—Trinidad, British Guiana, Peru.

The description is based upon the king, queen, and soldiers from a colony collected by the author in Trinidad and upon a queen, winged imagos and soldiers collected from two colonies by the author at Kartabo.

Subgenus *Cornitermes*, s. str. Holmgren

This subgenus formerly included eight species. The single species collected in British Guiana seems to be new, thus making nine known species belonging to the subgenus, all of which are found only in the Neotropical region.

Cornitermes (Cornitermes) pugnax, sp. nov.

(Fig. 48)

Imago.—Head dark brown, widely egg-shaped; clothed with a few long bristles; fontanelle large, oval and dark, longer than the ocelli. Two large muscle insertions in front of the ocelli.

Antennae with 15 segments, the 3d sometimes showing signs of division.

Eyes large and prominent. Ocelli large, distinctly more than their own length removed from the eyes. Labrum yellow brown.

Posterior clypeus dark brown, no median line visible.

Pronotum dark brown, a T-shaped series of light streaks in the middle; middle with few hairs but the margins with many; sides straight, converging strongly toward the rear; posterior margin somewhat emarginate. Wings dark smoky.

Posterior margins of the meso- and metanota widely emarginate; angles of the mesonotum sharp. Abdominal tergites and sternites dark brown.

Measurements.—

	Male	Female
Length with wings	16.40 mm.	19.00 mm.
Length without wings	9.50 mm.	11.00 mm.
Length of head	2.02 mm.	2.57 mm.
Width of head	1.99 mm.	2.31 mm.
Diameter of eye	.38 mm.	.55 mm.

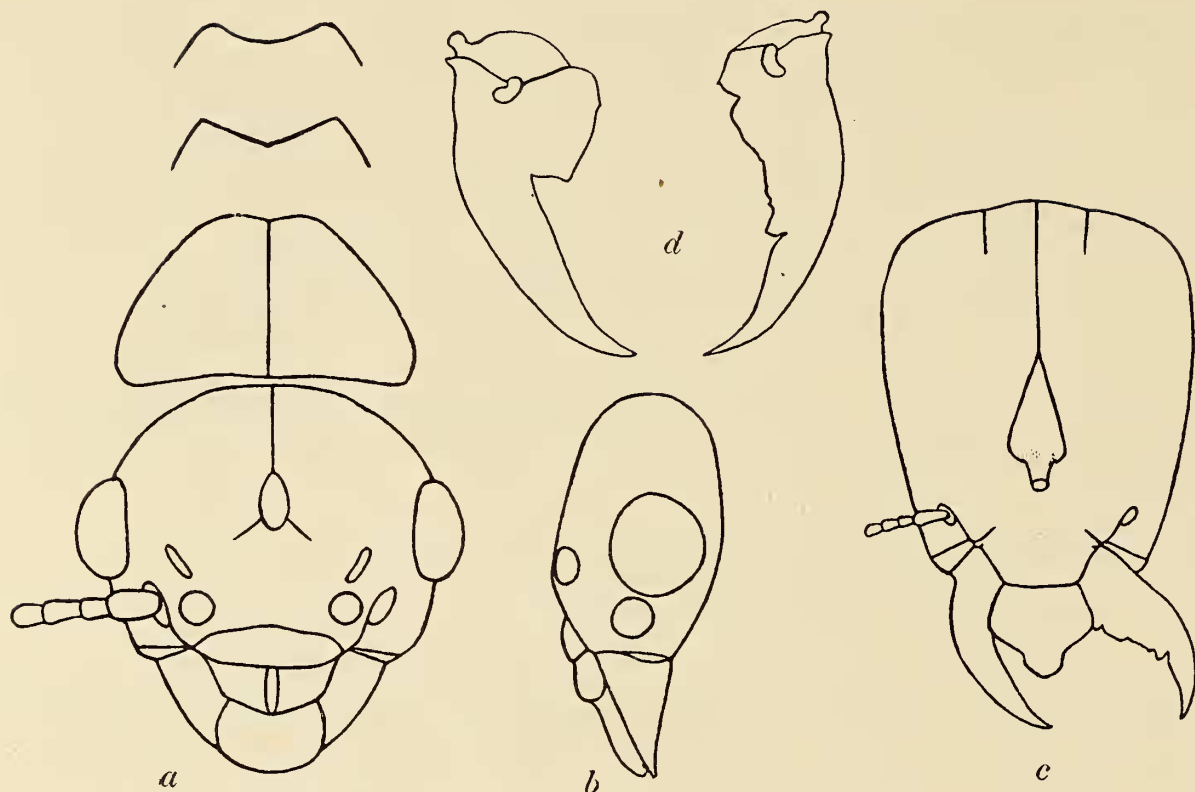


Fig. 48. *Cornitermes* (*Cornitermes*) *pugnax*, sp. nov. a, imago, dorsal view of head, pronotum and margins of thoracic nota; b, imago, lateral view of head; c, soldier, dorsal view of head; d, soldier, mandibles.

Measurements.—

Length of pronotum.....	.80 mm.	.96 mm.
Width of pronotum.....	1.67 mm.	1.83 mm.
Length of hind tibia.....	1.54 mm.	2.18 mm.
Length of anterior wing.....	13.35 mm.	14.60 mm.
Width of anterior wing.....	3.75 mm.	4.00 mm.
Length of queen.....		38.00 mm.
Width of abdomen of queen.....		7.00 mm.

Comparison with other species.—*C. similis* (Hagen) Silv. is lighter in color and the fontanelle is white.

Soldier.—Head yellow, subrectangular, widest toward the rear, narrowed somewhat in front; clothed with numerous medium long bristles.

Antennae yellow, with 15 segments. Labrum yellow, pentagonal or rounded in general shape, tip hyaline.

Mandibles large and powerful. Right mandible with one large tooth behind the middle and another small tooth near the base. Left mandible with rather coarse serrations.

Frontal tube at least .29 mm. long, upturned and fringed on the end with hairs.

Pronotum yellow, bristles only on the margins; anterior margin slightly emarginate. Legs pale.

Abdomen pale, tergites with many bristles.

Measurements.—

Total length.....	8.00–9.00 mm.
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Measurements.—

Length of head	4.30–4.40 mm.
Width of head	2.67–2.78 mm.
Length of antennae	2.57–2.65 mm.
Width of pronotum	1.28–1.38 mm.
Length of hind tibia	2.09–2.14 mm.
Length of left mandible	1.73 mm.

Comparison with other species.—Closest to *C. acignathus* Silvestri in size and shape of head, but it seems to differ in the dentation of the mandibles as figured by Silvestri (1903). It is possible, however, that this is the same species. Banks (1918) records *C. acignathus* from British Guiana and my specimens agree with his.

Type locality.—Kartabo, British Guiana.

Other localities.—Dunoon, British Guiana.

Holotype.—Soldier.

Morphotype.—Winged imago.

Described from numerous winged imagos, four reproductive forms and numerous soldiers collected by the author from six different colonies at Kartabo and several soldiers collected by F. M. Gaige from a single colony at Dunoon.

Genus *Armitermes* Wasmann

Holmgren (1912) divided this genus into three subgenera. It contains ten species distributed as follows: *Armitermes*, s. str. (seven), *Curvitermes* (two), *Rhynchotermes* (one). All subgenera are known only from the Neotropical region. Only one subgenus, *Armitermes*, s. str. has been found in British Guiana. Four new species described in this report bring the total number of species known in the genus to fourteen.

Subgenus *Armitermes*, s. str. Holmgren

Five species belonging to this subgenus were found in British Guiana, of which four proved to be new.

Armitermes (Armitermes) albidus (Hagen).

Termes albidus Hagen (1858), p. 225 (imago, soldier), pl. 3, fig. 34 (imago).

Termes albidus Hagen (1858a), p. 32 (imago).

(?) *Armitermes albidus* Silvestri (1901), p. 7.

(?) *Armitermes albidus* Silvestri (1903), p. 79 (imago, soldier, worker), p. 131 (biology), pl. 3, fig. 40 (soldier).

Armitermes euamignathus Silvestri (1901), p. 6 (imago); (1903), p. 76 (imago, soldier, worker), p. 129 (biol.), text-fig. 19 (wings), text-fig. 46 (nest), pl. 3, fig. 133 (imago), fig. 134 (soldier), figs. 135–137 (2d form, king and queen).

(Fig. 49)

Imago.—Head brownish black, oval; clothed with numerous long hairs. Fontanelle very small and inconspicuous.

Antennae with 15 segments, the 3d slightly shorter than the 2d, the 4th about the same length as the 3d.

Eyes of medium size, .064 mm. from the lower margin of the head.

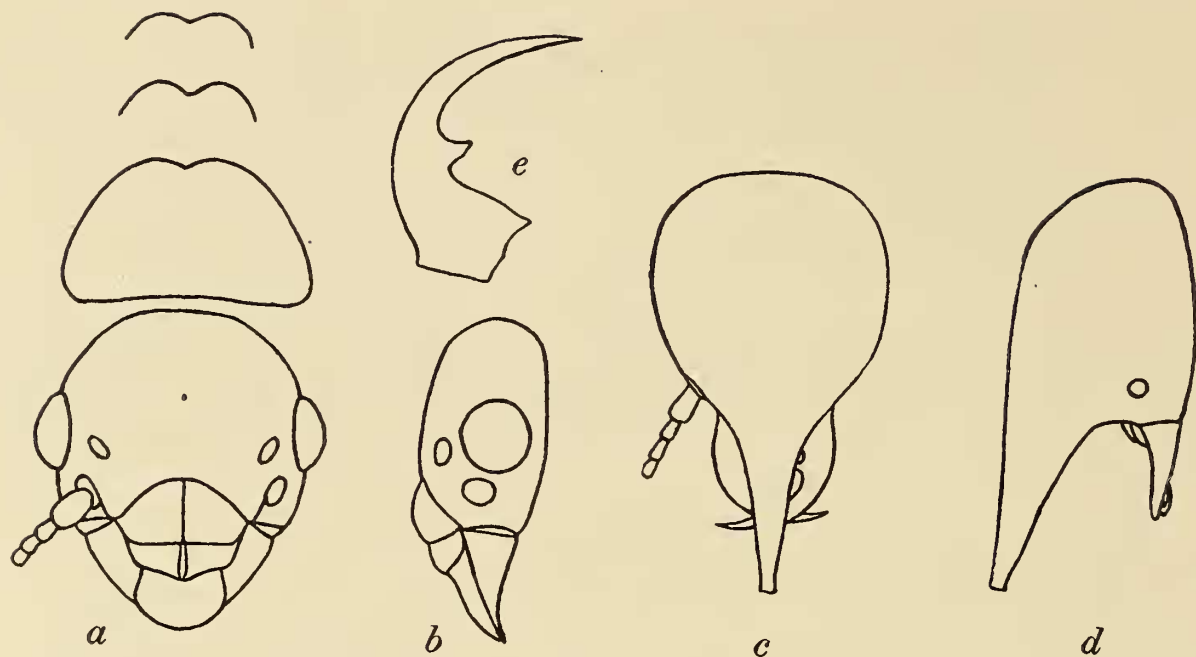


Fig. 49. *Armitermes (Armitermes) albidus* (Hagen). *a*, imago, dorsal view of head, pronotum and margins of thoracic nota; *b*, imago, lateral view of head; *c*, soldier dorsal view of head; *d*, soldier, lateral view of head; *e*, soldier, left mandible.

Ocelli oval, prominent, less than their diameter removed from the eyes. Labrum lighter than the head. Posterior clypeus brownish black, faint median line visible.

Pronotum brownish black; clothed with numerous long hairs. Pronotum not quite as wide as the head, sides fairly straight, posterior margin emarginate and angles rounded.

Posterior margins of the meso- and metanota emarginate, angles rounded, sides with a white band reaching nearly to the posterior margin. Wings dark smoky.

Abdominal tergites a little lighter than the pronotum.

Measurements.—

Length with wings.....	12.00–12.50 mm.
Length without wings.....	5.00– 6.50 mm.
Length of head.....	1.35 mm.
Width of head.....	1.16– 1.19 mm.
Length of antennae.....	1.77– 1.80 mm.
Diameter of eye.....	.35 mm.
Length of pronotum.....	.61 mm.
Width of pronotum.....	1.00 mm.
Length of hind tibia.....	1.64 mm.
Length of anterior wing.....	9.10 mm.
Width of anterior wing.....	2.57 mm.
Length of queen.....	23.50 mm.
Width of abdomen of queen.....	6.00 mm.
Length of king.....	5.00 mm.

Soldier.—Head brownish yellow, clothed with a few long hairs.

Antennae with 13–14 segments. Mandibles red brown, strongly curved,

a conspicuous tooth in the middle of each mandible. The tooth of the left mandible obliquely truncated, larger than the tooth of the right mandible.

Nose stout, usually somewhat turned up at the end.
Pronotum with marginal bristles and shorter hairs, anterior margin about the same color as the head. Legs pale.
Abdomen the color of the contents of the intestine; tergites covered with long hairs and a row of bristles on the posterior margins.

Measurements.—

Total length	4.00–7.00 mm.
Length of head	1.80–1.95 mm.
Width of head	1.00–1.07 mm.
Length of antennae	1.50–1.60 mm.
Length of pronotum	.32 mm.
Width of pronotum	.61–.64 mm.
Length of hind tibia	1.00–1.07 mm.
Length of left mandible	.64 mm.

Remarks.—This species does not agree very well with Silvestri’s descriptions and figure, but agrees with Hagen’s types in the Museum of Comparative Zoology, Cambridge, Mass., and also agrees with Hagen’s description. Specimens of *A. euamignathus* Silvestri, determined by Silvestri from Asuncion, Paraguay, agree perfectly in both imago and soldier characters with the Kartabo specimens.

Type locality.—Santarem, Brazil.
New localities.—Kartabo, British Guiana; Port of Spain, Trinidad.
Range.—Brazil, British Guiana, Trinidad, Paraguay, Matto Grosso.

The description is based upon many specimens of all castes collected by the author from nine different colonies at Kartabo. Several soldiers and workers collected by the author from a single colony in Trinidad also agree with the Kartabo specimens.

Armitermes (Armitermes) percutiens, sp. nov.
(Fig. 50)

Imago.—Head light brown, light dots at the base of every hair, giving a speckled appearance, region around the base of the antennae yellow; widely oval; clothed with long hairs. Fontanelle small, inconspicuous.
Antennae pale, with 15 segments.
Eyes large, prominent, close to the lower margin of the head. Ocelli fairly large, less than their diameter from the eyes.
Labrum yellow. Postclypeus yellow with median line.
Pronotum yellow, lighter than the head; hind margin emarginate, sides rounded.
Wings hyaline, covered with short hairs.

Measurements.—

Length with wings	12.00–13.00 mm.
Length without wings	6.50–7.50 mm.

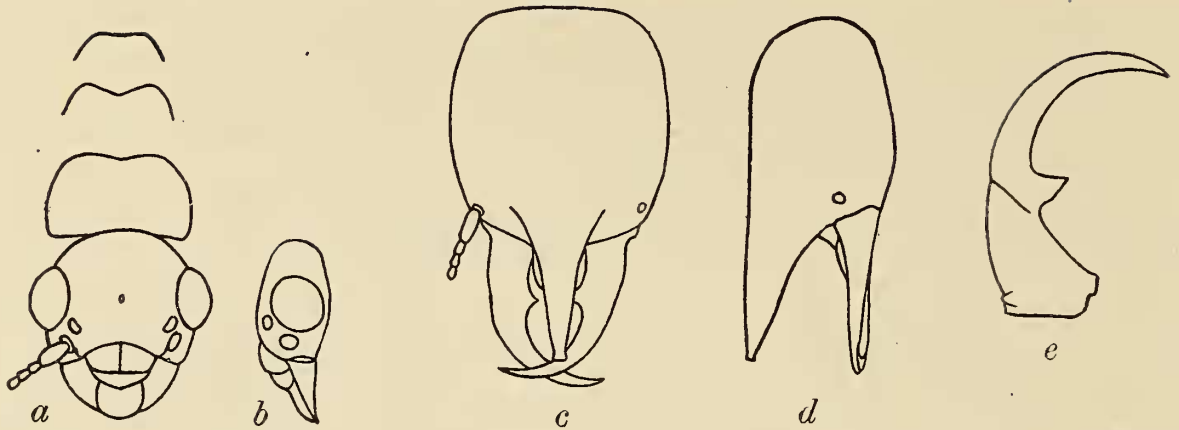


Fig. 50. *Armitermes (Armitermes) percutiens*, sp. nov. a, imago, dorsal view of head, pronotum and margins of thoracic nota; b, imago, lateral view of head; c, soldier, dorsal view of head; d, soldier, lateral view of head; e, soldier, left mandible.

Measurements.—

Length of head	1.18– 1.22 mm.
Width of head	1.12– 1.18 mm.
Length of antennae	1.85– 1.93 mm.
Diameter of eye	.42 mm.
Length of pronotum	.55 mm.
Width of pronotum	.96– 1.00 mm.
Length of hind tibia	1.51 mm.
Length of anterior wing	10.40 mm.
Width of anterior wing	2.78 mm.

Comparison with other species.—Very close to *A. neotenicus* Holmgren, but seems to differ in the fontanelle not being triangular. The eyes also seem to be a little larger than in Holmgren's figure.

Soldier.—Head yellow, somewhat rectangular, sides a little rounded, profile straight or slightly convex; clothed with a few bristles.

Antennae pale, 14-segmented, the 2d shorter than the 3d, the 4th shorter than the 2d.

Mandibles longer than the nose, strongly curved; base yellowish, tips dark. The left mandible with a conspicuous, pointed, triangular tooth, usually with a tendency toward being truncate, and another obtuse tooth near the base; inner edge between the tip and 1st tooth with microscopical serrations. Right mandible with a conspicuous tooth in the middle.

Pronotum pale, front margin emarginate. Legs pale.

Abdominal tergites hairy. Abdomen the color of the intestinal contents.

Measurements.—

Total length	5.00–6.50 mm.
Length of head	2.18–2.25 mm.
Width of head	1.28 mm.
Length of antennae	1.93 mm.
Length of pronotum	.40– .42 mm.
Width of pronotum	.75– .77 mm.
Length of hind tibia	1.12 mm.
Length of left mandible	1.09 mm.

Comparison with other species.—Differs from *A. neotenicus* in the mandible being a little more curved and the profile straighter. *Specimens of soldiers from the Putymayo, Peru collected by Dr. J. C. Bradley, which I am tentatively referring to *A. neotenicus*, are a little larger than *A. percutiens* and the tooth of the left mandible does not have so much of a tendency to be truncate.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Winged imago.

Morphotype.—Soldier.

The description is based upon many specimens of winged imagos and soldiers collected at Kartabo by the author from ten different colonies. Only one queen of the first form was found in these colonies but many kings and queens of the second form were found.

***Armitermes (Armitermes) teevani*, sp. nov.**

(Fig. 51)

Imago.—Head dark brown, oval, covered with a few bristles.

Antennae with 16 segments, the 2d, 3d and 4th about equal.

Eyes large, prominent and close to the lower margin of the head. Ocelli large, oval, .26 mm. long, about $\frac{1}{4}$ their length from the eyes.

Labrum yellow brown. Posterior clypeus yellow brown with no median line. Fontanelle conspicuous, smaller than ocelli.

Pronotum brown, lighter than the head; a series of Y-shaped light dots in the middle ending near the posterior border in two dots on either side of the median line. Sides straight, converging strongly toward the rear; posterior margin only slightly emarginate; angles rounded; front margin straight.

Posterior margins of the meso- and metanota concave; angles of mesonotum rather sharply rounded.

Wings transparent with a yellowish tinge; costal margin and veins brownish; base of wing near the suture brownish; membrane covered with short hairs.

Measurements.—

Length with wings	18.00–19.00 mm.
Length without wings	9.00–10.00 mm.
Length of head	1.93– 2.09 mm.
Width of head	1.86– 1.99 mm.
Length of antennae	2.73 mm.
Diameter of eye	.65– .67 mm.
Length of pronotum	.80 mm.
Width of pronotum	1.51– 1.64 mm.
Length of hind tibia	2.35 mm.
Length of anterior wing	14.10 mm.
Width of anterior wing	4.00 mm.

Soldier.—Head yellow brown, large, profile nearly straight; clothed with a few hairs.



Fig. 51. *Armitermes (Armitermes) teevani*, sp. nov. a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, soldier, left mandible; d, soldier, dorsal view of head; e, soldier, lateral view of head.

Antennae with 15 segments, the 4th longer than the 3d, the 2d equal to the 4th.

Mandibles dark red brown, strongly curved, a conspicuous large triangular tooth near the middle of each; right and left mandible nearly the same.

Nose very long and large, nearly as long as the rest of the head.

Pronotum with bristles and short hairs, front margin only very slightly emarginate.

Abdomen the color of the intestinal contents; tergites with long hairs and bristles.

Measurements.—

Total length.....	5.50–7.00 mm.
Length of head.....	3.12–3.20 mm.
Width of head.....	1.57–1.64 mm.
Length of antennae.....	2.73 mm.
Length of pronotum.....	.43–.51 mm.
Width of pronotum.....	.96 mm.
Length of hind tibia.....	1.90 mm.
Length of left mandible.....	1.35 mm.

Comparison with other species.—The mandibles are more strongly curved than in any other member of this subgenus.

Type locality.—Kartabo, British Guiana.

Other localities.—Onderneeming, British Guiana.

Holotype.—Winged imago.

Morphotype.—Soldier.

The description is based upon several winged imagos and soldiers collected at Kartabo by Mr. John Tee-Van, many soldiers collected at four different colonies at Kartabo by the author and several soldiers collected at Onderneeming from a single colony by Mr. G. E. Bodkin. I take pleasure in naming the species in honor of Mr. John Tee-Van, who collected the only specimens of winged imagos and who helped me in many other ways in my work on termites at Kartabo.

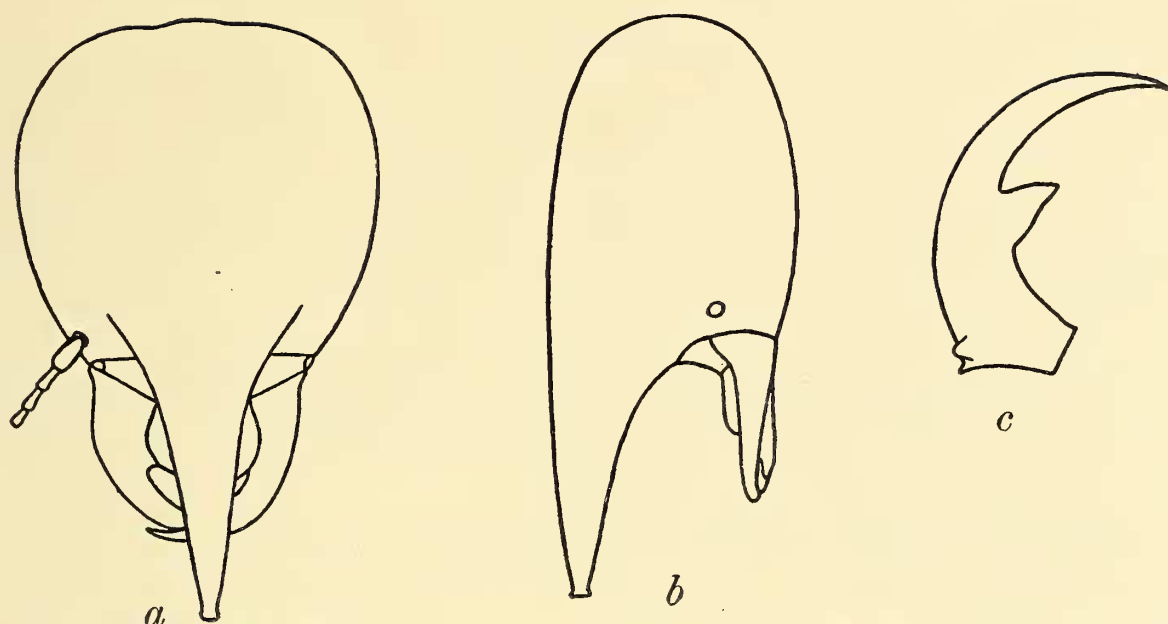


Fig. 52. *Armitermes (Armitermes) grandidens*, sp. nov. a, soldier, dorsal view of head; b, soldier, lateral view of head; c, soldier, left mandible.

***Armitermes (Armitermes) grandidens*, sp. nov.**

(Fig. 52)

Soldier.—Head brownish yellow, roundly oval with a convex profile; usually covered with about 6–10 bristles.

Antennae with 14 segments, the 2d equal to the 3d, the 4th a little shorter than the 3d.

Labrum with a rounded tip. Mandibles dark red brown, strong and curved, about $\frac{2}{3}$ the length of the nose. Left mandible with a large strong triangular tooth in the middle, somewhat pointed up. Right mandible somewhat similar to the left.

Nose long and stout, slightly reddish.

Pronotum with the anterior margin yellow; margins with long bristles.

Abdomen the color of the contents of the intestine; sternites with long hairs.

Measurements.—

Total length.....	7.50–8.00 mm.
Length of head.....	3.21–3.37 mm.
Width of head.....	1.71–1.77 mm.
Length of antennae.....	2.15–2.25 mm.
Length of pronotum.....	.53–.57 mm.
Width of pronotum.....	.96–1.03 mm.
Length of hind tibia.....	1.54–1.60 mm.
Length of left mandible.....	1.22 mm.

Comparison with other species.—Closest to *A. peruanus* Holmgren, but smaller. The tooth of the mandible proportionately larger than in Holmgren's figure (1912, p. 57).

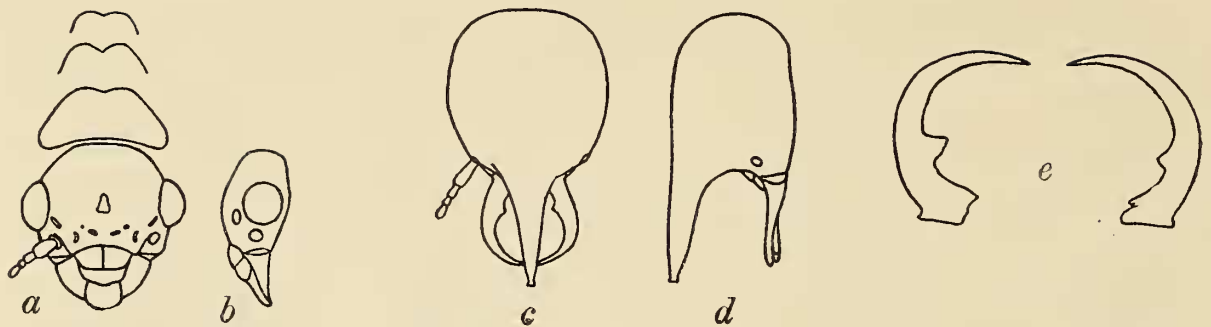


Fig. 53. *Armitermes (Armitermes) minutus*, sp. nov. a, imago, dorsal view of head, pronotum and margins of thoracic nota; b, imago, lateral view of head; c, soldier, dorsal view of head; d, soldier, lateral view of head; e, soldier, mandibles.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Soldier.

The description is based upon numerous soldiers collected by the author from two different colonies at Kartabo. The nest and reproductive forms were never discovered.

***Armitermes (Armitermes) minutus*, sp. nov.**

(Fig. 53)

Imago (king).—Head brown, oval, somewhat angular behind; covered with a few bristles. Fontanelle dull, large and triangular. Muscle insertions in a curved row in front of the fontanelle.

Antennae pale, with 14 segments, the 3d much smaller than the 2d, the 2d equal to the 4th.

Eyes large, prominent and close to the lower margin of the head. Ocelli of medium size, prominent, less than $\frac{1}{2}$ their diameter from the eyes.

Labrum lighter than the head. Posterior clypeus lighter than the head, long, with median line.

Pronotum brown, narrower than the head; sides straight, angles rounded, posterior margin emarginate.

Posterior margins of the meso- and metanota emarginate, angles rounded. Abdominal tergites brown, hairy.

Measurements.—

Length of head	1.03 mm.
Width of head	.94 mm.
Length of antennae	1.30 mm.
Diameter of eye	.30 mm.
Length of pronotum	.43 mm.
Width of pronotum	.77 mm.
Length of hind tibia	1.06 mm.
Length of king	3.40 mm.

Comparison with other species.—Smaller than any other known species of this subgenus.

Soldier.—Head yellow brown, roundly oval with a straight profile; sparsely covered with bristles.

Antennae pale, with 13 segments, the 3d nearly as long as the 2d, the 4th shorter than the 3d.

Mandibles darker than the head, nearly as long as the nose, strongly curved. The left mandible with large tooth obliquely truncated; the inside edge of the mandible between the apex and the tooth with minute serrations pointed backwards. The tooth on the right mandible is triangular.

The nose slightly darker than the head, of medium length and rather large.

Pronotum with the anterior margin the same color as the head.

Abdomen the color of the intestinal contents; tergites hairy.

Measurements.—

Total length	3.00–5.50 mm.
Length of head	1.50–1.54 mm.
Width of head	.87 mm.
Length of antennae	1.35 mm.
Length of pronotum	.21 mm.
Width of pronotum	.53 mm.
Length of hind tibia	.75–.83 mm.
Length of left mandible	.71 mm.

Comparison with other species.—Smaller than any other known member of this subgenus.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Soldier.

Morphotype.—King.

The description is based upon a single king and many soldiers collected from seven different colonies at Kartabo by the author. Many 2d form queens and a single 2d form king were also found.

Genus *Nasutitermes* Banks

The name of this genus, long known as *Eutermes*, has recently been changed to *Nasutitermes* by Banks (Banks & Snyder, 1920) because specimens determined by Hagen as *Eutermes debilis* Heer, the type of the genus, have proved to belong to *Microcerotermes*. This change has caused consternation among many workers and my impression is that numerous authorities will not accept the change of names, at least at present. However, Banks is right in saying that the name *Eutermes* should be given to the genus to which *Eutermes debilis* Heer belongs. Banks, however, has not seen the type specimen and I have the impression that Hagen may very likely have been wrong in his determination of *Eutermes debilis* as a West Indian species, now known as a *Microcerotermes*. It is well known how difficult it is, even with our present knowledge of termites, to determine genera accurately from the imago alone, and Hagen knew little of our modern generic divisions and the characters by which they are separated. I expect

that I have no good cause to doubt this determination without seeing the original copal specimen which Hagen states is in the "Zurich Museum," but as this change of generic names involves the change of a great many specific names of species of *Microcerotermes* which have been given the same specific names as species of *Eutermes*, I feel that I have the right not to accept this change of names until the matter has been cleared by the accurate determination of the type specimen.

Thus, in order to avoid the change of so many specific names now and in the future, I have resolved to confine the name *Eutermes* to the original species, to use the name *Nasutitermes* in place of the generally accepted name *Eutermes*, and to leave the name *Microcerotermes* as it is. With this method, the different specific names can remain unchanged at present until *Eutermes debilis* Heer has been carefully examined and compared with modern genera. Neither of the generic names I use in this report should confuse the various workers.

I use the term *Nasutitermes* to include all those forms which possess nasuate soldiers with degenerate mandibles. I have also placed the forms in subgenera using Holmgren's (1912) classification, although I realize that the group as a whole needs to be thoroughly revised with material from all parts of the world, before all these subgenera are well established. Many of them may also be raised to generic rank in the future, but at present I believe it will be less confusing to treat them all as belonging to a single genus.

In the sense in which I use the name, the genus *Nasutitermes* is the dominant genus of the world. It is found in all tropical countries the world over and includes 288 species, over half of which belong to the subgenus *Nasutitermes*, s. str. *Nasutitermes* has been divided into twenty subgenera, five of which were found in British Guiana. One new species differed so much from the known species of the genus that I have placed it in a new subgenus, *Angularitermes*.

Altogether there are nine subgenera reported from the Neotropical region including *Angularitermes*. Of these six are known to occur in British Guiana.

Subgenus *Nasutitermes*, s. str.

This subgenus now contains 154 species including the new forms described in this report. Its distribution is the widest of any of the subgenera of *Nasutitermes*. It is found in all the tropical regions of the world and is distributed as follows: Australia, South Sea Islands and New Guinea twenty-two; Africa, Madagascar and surrounding islands twenty-four; Oriental region thirty-seven; Neotropical region seventy.

Twelve species were found in British Guiana which I am referring to this subgenus, four of which are described as new.

Nasutitermes (*Nasutitermes*) *guayanae* (Holmgren).

Eutermes (E.) *guayanae* Holmgren (1910), p. 254 (soldier, worker), text-fig. 36 (soldier).

Nasutitermes guayanae Banks 1918, p. 666 (locality).

(Fig. 54)

Imago.—Head brown to dark brown, widely oval; clothed thickly with short hairs and longer bristles; fontanelle slit-shaped, forked at the anterior end, nearly as long as the ocelli.

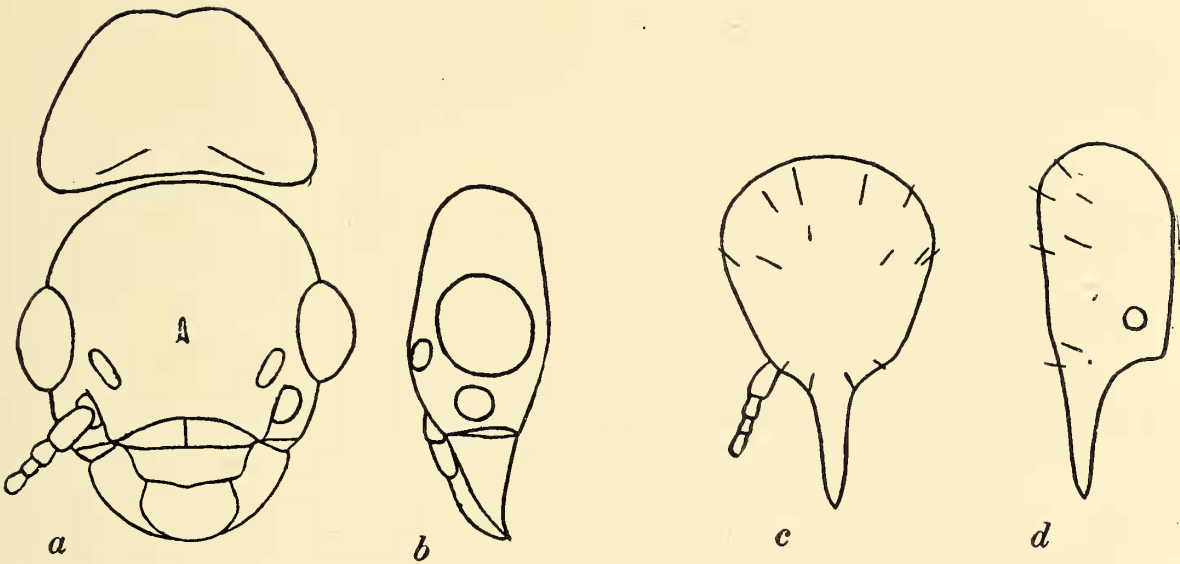


Fig. 54. *Nasutitermes (Nasutitermes) guayanae* (Holmgren). *a*, imago, dorsal view of head and pronotum; *b*, imago, lateral view of head; *c*, soldier, dorsal view of head; *d*, soldier, lateral view of head.

Antennae lighter than the head, with 16 segments, the 3d segment a little narrower than the 2d, the 2d equal to the 4th.

Eyes fairly large and somewhat close to the lower margin of the head. Ocelli of medium size, about 1/2 their length removed from the eyes.

Labrum lighter than the head. Postclypeus lighter than the head, short, median line visible.

Pronotum same color as the posterior clypeus, not as wide as the head, sides nearly straight, posterior margin emarginate, angles rounded; thickly covered with hair and longer bristles.

Meso- and metanota same color as posterior clypeus; posterior margins emarginate. The angles vary from sharp to round. Abdominal tergites and sternites with long hairs.

Measurements.—

Length with wings.....	17.00 mm.
Length without wings.....	9.00–10.00 mm.
Length of head.....	1.67– 1.77 mm.
Width of head.....	1.51– 1.54 mm.
Length of antennae.....	2.40 mm.
Diameter of eye.....	.48 mm.
Length of pronotum.....	.67– .71 mm.
Width of pronotum.....	1.25– 1.28 mm.
Length of hind tibia.....	1.83 mm.
Length of anterior wing.....	12.76 mm.
Width of anterior wing.....	3.66 mm.
Length of queen.....	26.00 mm.
Length of king.....	7.00 mm.
Width of abdomen of queen.....	7.00 mm.

Comparison with other species.—Specimens of *N. columbicus* (Holmgren) from Panama lent to me by Dr. T. E. Snyder are before me. The imago is shorter in length and the eyes are conspicuously smaller than in *N. guayanae*. It is undoubtedly a distinct species.

Soldier.—Head red brown to dark brown, base of antennae sometimes somewhat lighter; covered with a number of long bristles, 4 at the base of the nose and from 6–12 on the vertex. Head without nose egg-shaped, widest near the posterior part. Profile nearly straight, with an elevation at the base of the nose.

Antennae with 14 segments, the 3d very slightly smaller than the 2d, the 2d and 4th about equal or the 2d is slightly smaller.

Nose fairly large, of medium thickness, the end sometimes lighter than the rest of the head.

Pronotum with a row of minute hairs, longer bristles on the anterior margin; anterior margin dark, not emarginate.

Abdomen somewhat lighter than the head; tergites with a single row of bristles on the posterior margins but entirely lacking short hairs.

Measurements.—

Total length	4.00–5.20 mm.
Length of head	1.73–1.80 mm.
Width of head	1.05–1.15 mm.
Length of antennae	1.54 mm.
Width of pronotum	.58 mm.
Length of hind tibia	1.35–1.38 mm.

Remarks.—The nose varies considerably in the proportionate length and the elevation at the base of the nose is more conspicuous in some cases than in others. The variations in color are also rather striking. However, in the large series before me from Kartabo I can find no characters which will distinguish any definite forms.

Comparison with other species.—There seems to be no difference distinguishable between *N. columbicus* and *N. guayanae* soldiers. Holmgren's distinctions do not hold, as specimens of *N. guayanae* agree with his description of *N. columbicus* and also specimens of soldiers from Panama which I refer to *N. columbicus* do not differ in any appreciable way, although the imagos are easily distinguished.

Type locality.—Upper Surinam.

Other localities.—British Guiana: Tukeit, Kaietur, Amatuk, Tumatumari.

New localities.—British Guiana: Kartabo, Dunoon, Upper Cuyuni River, Wenamu River.

The description is based upon several winged imagos, many first form reproductive individuals, and many soldiers collected by the author from thirty-two different colonies at Kartabo. Specimens collected by F. M. Gaige from six different colonies at Dunoon, specimens from a single colony collected by Mr. John Tee-Van at Tukeit, and specimens collected by Lavarre from the Upper Cuyuni and Wenamu rivers also agree with the Kartabo specimens.

Nasutitermes (Nasutitermes) costalis (Holmgren).

This species is very variable and has been described under many different names by various authors. I have before me, however, an excellent series of both imagos and soldiers from British Guiana and the West Indies and feel that all doubtless belong to the same species. The specimens from Kartabo alone were found to agree with the various descriptions, and the added knowledge of the imagos makes their identification quite certain.

Banks (Banks and Synder 1920) made *N. morio* (Latr.) the type of the genus *Nasutitermes*. Fabricius (1793), however, had already described a *Termes morio* which is now doubtfully placed in synonymy with *Coptotermes testaceus* (L.). It seems probable that Hagen's *Termes morio* is synonymous with Latreille's. The name of this species, therefore, has to be changed and I have chosen the name *N. costalis* from among the various species described by Holmgren (1910) as the one that has the least doubt concerning its identity. Therefore, *N. costalis* (Holmgren) will be the type species of *Nasutitermes*.

Nasutitermes (Nasutitermes) costalis (Holmgren).

- Termes morio* Latreille (1805), p. 69; (1805a), no. 3.
Termes morio Hagen (1858), p. 200, pl. 3, fig. 29; (1858a), p. 27 (imago); (1860a), p. 122 (imago, soldier).
Termes morio Burmeister (1839), p. 767.
Eutermes costalis Holmgren (1910), p. 293 (imago), text-fig. 64 (imago).
Eutermes Sanctae-Luciae Holmgren (1910), p. 226 (soldier, worker), text-fig. 17 (soldier).
Eutermes martiniquensis Holmgren (1910), p. 238 (soldier, worker), text-fig. 25 (soldier).
Eutermes cayennae Holmgren (1910), p. 232 (soldier, worker), text-fig. 21 (soldier).
Eutermes Cayennae, form *atriceps* Holmgren (1910), p. 234 (soldier), text-fig. 21 (soldier).
Eutermes Cayennae, form *brevinasus* Holmgren (1910), p. 234 (soldier, worker).
Eutermes Cayennae, form *lividus* Holmgren (1910), p. 232 (soldier, worker).
Eutermes Sanchezi Holmgren (1910), p. 236 (soldier), text-fig. 23 (soldier).
Termes (Eutermes) morio Desneux (1915), p. 9 (locality).
Nasutitermes morio Banks (1919), p. 486, 482 (imago, soldier).
Nasutitermes sanchezi Banks (1919), p. 487 (imago), p. 482 (imago, soldier).

(Fig. 55 a, b, c, d)

Eutermes insularis Holmgren (1910) is somewhat larger than any specimens of *Nasutitermes costalis* that I have seen, but I am inclined to believe that it is probably the same species. Banks (Banks & Snyder, 1920) described a species referred to *Nasutitermes costaricensis* from soldiers which coincides with *Nasutitermes costalis*. However, Holmgren (1910) in his key states that the eyes of *N. costaricensis* are larger than those of *N. costalis*.

Imago.—Head dark brown, widely oval. Fontanelle small, forked at the tip. Muscle insertions in a curved row in front of the fontanelle.

Antennae lighter than the head, with 15 segments, the 3d slightly shorter than the 2d, the 3d equal to the 4th.

Eyes small, .14 mm. removed from the lower margin of the head.

Ocelli small, .096 mm. long and .16 mm. removed from the eyes.

Labrum lighter than the head. Postclypeus lighter than the head, median line present.

Pronotum nearly the same color as the head, light streaks in the middle often form T-shaped marks; sides straight, posterior margin not or very slightly emarginate.

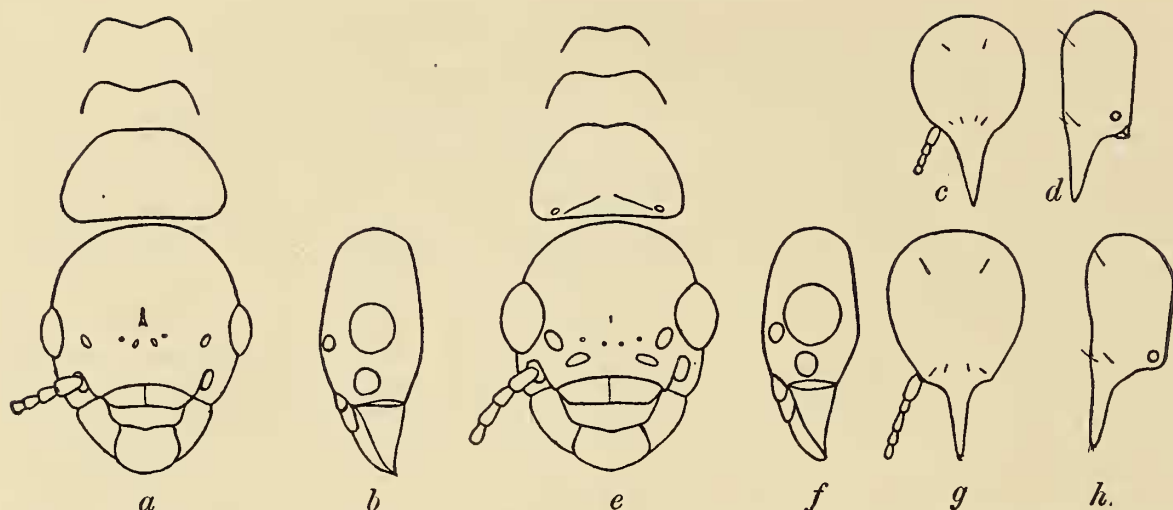


Fig. 55. *Nasutitermes (Nasutitermes) costalis* (Holmgren). *a*, imago, dorsal view of head, pronotum and margins of thoracic nota; *b*, imago, lateral view of head; *c*, soldier, dorsal view of head; *d*, soldier, lateral view of head.

Nasutitermes (Nasutitermes) ephratae (Holmgren). *e*, imago, dorsal view of head, pronotum and margins of thoracic nota; *f*, imago, lateral view of head; *g*, soldier, dorsal view of head; *h*, soldier, lateral view of head.

Posterior margins of meso- and metanota widely emarginate.

Wings dark smoky, usually lighter between the media and cubitus.

Measurements.—

Length with wings.....	14.00–15.00 mm.
Length without wings.....	7.50– 8.50 mm.
Length of head.....	1.54– 1.64 mm.
Width of head.....	1.38– 1.45 mm.
Length of antennae.....	2.25 mm.
Diameter of eye.....	.32– .35 mm.
Length of pronotum.....	.67– .74 mm.
Width of pronotum.....	1.15– 1.28 mm.
Length of hind tibia.....	1.61– 1.64 mm.
Length of anterior wing.....	11.58 mm.
Width of anterior wing.....	3.19 mm.
Length of queen.....	29.50 mm.
Width of abdomen of queen.....	7.00 mm.

Remarks.—Specimens from Dominica and St. Lucia are slightly smaller than those from British Guiana but otherwise no difference can be detected. Specimens from Antigua are usually lighter in color than those from Dominica, St. Lucia, Trinidad and British Guiana.

Soldier.—Head dark reddish brown, lighter around the base of the antennae. Oval in shape, not including the nose, profile with elevation at the base of the nose. Clothed with 6 bristles, 4 at the base of the nose and 2 on the vertex.

Antennae yellowish near the end, with 13 segments, the 3d longer than the 2d, the 2d equal to the 4th.

End of nose lighter than the base; nose rather short and fairly stout at the base.

Pronotum with a brown anterior margin lined with bristles and microscopical hairs.

Abdominal tergites yellowish brown with a single row of bristles on the posterior margins and also covered with microscopical hairs. Hairs on the sternites longer.

Measurements.—

Total length.....	3.50–4.50 mm.
Length of head.....	1.41–1.54 mm.
Width of head.....	.83–1.00 mm.
Length of antennae.....	1.61 mm.
Width of pronotum.....	.50–.53 mm.
Length of hind tibia.....	1.12–1.16 mm.

Remarks.—The nose in some cases is stout and in others medium, the elevation at the base of the nose is conspicuous in some cases and in others nearly absent. Measurements also vary considerably. However, I found some of Holmgren's forms of *E. Cayennae* in the same nest in British Guiana, so I believe that these variations are not definite enough to separate races or forms.

Type locality.—Trinidad.

New localities.—British Guiana: Kartabo, Georgetown; Trinidad: St. Joseph, Port of Spain; St. Lucia: Union, Castries; Martinique: Fort de France; Dominica; Antigua; St. Kitts; Grenada; Dominican Republic: Santiago, Sanchez.

Range.—Brazil, French Guiana, Surinam, British Guiana, Venezuela, Trinidad, Grenada, St. Lucia, Martinique, Dominica, St. Kitts, Monserrat, Antigua, St. Croix, Porto Rico, Hispaniola, Cuba, Jamaica, Guatemala, Panama. (Some of these localities need verification.)

The description is based upon a series from the following localities: Kartabo, British Guiana (many 1st form reproductive individuals and soldiers from sixteen different colonies collected by the author); Georgetown, British Guiana (several first form reproductive individuals and soldiers collected from two different colonies by the author and G. E. Bodkin); St. Joseph, Trinidad (many first form reproductive individuals and soldiers from five different colonies collected by the author); Port of Spain, Trinidad (many soldiers collected from two colonies by the author); Grenada (many first form reproductive individuals and soldiers collected from three different colonies by the author); St. Lucia (several first form reproductive individuals and winged imago collected from five different colonies by Dr. J. C. Bradley and the author); Martinique (numerous soldiers collected from two colonies by Dr. Wm. M. Wheeler and the author); Dominica (several winged imago and soldiers collected from six different colonies by the author); Antigua (several winged imago, kings and queens and soldiers collected from three colonies by the author); St. Kitts (several soldiers collected from four different colonies by the author); Santiago and Sanchez, Dominican Republic (many soldiers collected from two colonies by H. B. Sherman).

Nasutitermes (*Nasutitermes*) *ephratae* (Holmgren).

Eutermes ephratae Holmgren (1910), p. 223 (imago, worker), *text-fig.* 14 (imago).

Eutermes Klinckowstroemi Holmgren (1910), p. 225 (soldier), *text-fig.* 16 (soldier).

Nasutitermes ephratae Banks (1918), p. 665 (imago, soldier), p. 666 (locality), pl. II, fig. 2 (right) (imago), fig. 11 (soldier).

(Fig. 55, e, f, g, h)

Imago.—Head brown (the mature reproductive forms have lighter heads), widely oval. Fontanelle small, slit-shaped. 4 muscle insertions in a curved row in front of the fontanelle and 2 large ones in front of the ocelli.

Antennae with 15 segments, the 3d longer than the 2d or 4th and shorter than the 1st, the 2d equals the 4th.

Eyes of medium size, oval, .125–.16 mm. from the lower margin of the head. Ocelli rather large and close to the eyes (variation in the distance of the ocelli from the eyes was noticed in imagos from the same colony), in all cases the ocelli are less than their width removed from the eyes.

Labrum brownish yellow. Postclypeus brownish yellow with median line.

Pronotum brownish yellow, rather small; sides somewhat rounded, posterior margin very slightly emarginate.

Posterior margins of the meso- and metanota widely emarginate, angles not very sharp. Legs yellow. Wings light yellow, rather opaque.

Abdominal tergites brownish, nearly the same color as the pronotum.

Measurements.—

Length with wings	12.50–14.50 mm.
Length without wings	7.00– 9.00 mm.
Length of head	1.54– 1.77 mm.
Width of head	1.32– 1.51 mm.
Length of antennae	2.38– 2.57 mm.
Diameter of eye	.42– .45 mm.
Length of pronotum	.55– .71 mm.
Width of pronotum	.96– 1.38 mm.
Length of hind tibia	1.61– 1.67 mm.
Length of anterior wing	10.05–11.58 mm.
Width of anterior wing	2.84– 3.19 mm.
Length of queen	24.00 mm.
Width of abdomen of queen	5.50 mm.
Length of king	8.50 mm.

Comparison with other species.—Can be easily distinguished from *N. costalis* by the larger eye and the ocelli less than their diameter from the eye.

Soldier.—Head rather dark reddish brown, oval without nose; clothed with 4 bristles at the base of the nose and 2 on the vertex; profile with elevation at the base of the nose.

Antennae yellow, a little darker near the base, with 12 or 13 segments. If with 13 segments, the 3d is nearly as long as the 1st and much longer than the 2d or 4th, the 2d equals the 4th. If with 12 segments, the 4th is as long as the 3d, sometimes the 4th showing signs of dividing.

Nose about medium size and thickness, the same color as the rest of the head.

Pronotum yellowish, anterior margin brown and rounded. Legs yellow.

Abdominal tergites brownish yellow with marginal bristles and microscopical hair which is hardly visible. Sternites yellow.

Measurements.—

Total length	4.00–4.25 mm.
Length of head	1.25–1.61 mm.
Width of head	.74–1.06 mm.
Length of antennae	1.61–1.73 mm.
Width of pronotum	.42–.55 mm.
Length of hind tibia	.96–1.22 mm.

Comparison with other species.—Very close to *N. costalis*, but the nose is generally more slender and the abdominal tergites do not have as conspicuous microscopical hair as in *N. costalis*.

Remarks.—The description of *N. klinckowstroemi* (Holmgren) agrees with this description and I am of the opinion expressed by Banks (1918) that they are the same species.

Type locality.—Ephrata, Surinam.

New localities.—British Guiana: Kartabo, Penal Settlement, Dunoon, Kaieteur; Trinidad: St. Joseph.

Range.—Surinam, British Guiana, Trinidad, Panama.

The description is based upon many winged imagos, kings, queens, and soldiers collected at Kartabo from twenty-four different colonies by the author; soldiers from Kaieteur collected by Mr. John Tee-Van from a single colony; winged imagos, queens and soldiers from Dunoon collected from a single colony by F. M. Gaige; kings, queens and soldiers from the Penal Settlement collected from 2 different colonies by the author; and soldiers from a single colony from Trinidad collected by the author.

Nasutitermes (*Nasutitermes*) *octopilis* Banks.

Nasutitermes octopilis Banks, 1918, p. 666 (soldier, biology), text-fig. (soldier).

(Fig. 56)

Imago.—Head brown, widely oval, Y-suture distinct; clothed with hairs and bristles. Fontanelle small, triangular.

Antennae yellowish, with 15 segments, the 2d, 3d, and 4th equal.

Eyes very large, prominent, and very close to the lower margin of the head. Ocelli very large, prominent, and very close to the eyes.

Labrum lighter than the head. Postclypeus lighter than the head, median line faint and indistinct.

Pronotum about the same color as the head or somewhat lighter, particularly near the middle; covered with hairs and bristles; a little narrower than the head, angles and sides rounded, posterior margin emarginate.

Posterior margins of the meso- and metanota widely emarginate.

Wings light yellow brown, the radius, media, and first few branches of the cubitus near the scale darker. All the veins in the outer half of the wing light.

Abdominal tergites about the same color as the head.

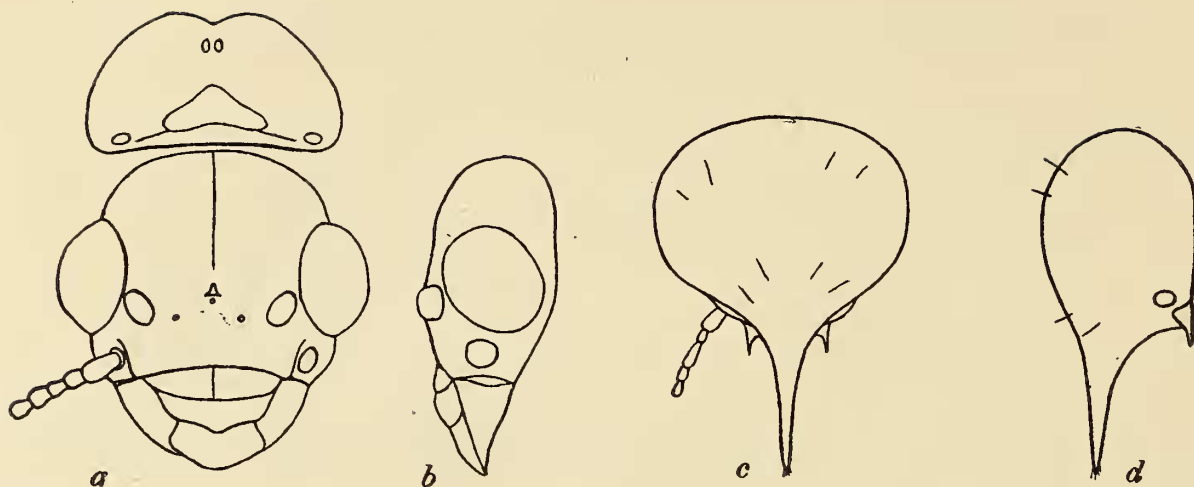


Fig. 56. *Nasutitermes* (*Nasutitermes*) *octopilis* Banks. *a*, imago, dorsal view of head and pronotum; *b*, imago, lateral view of head; *c*, soldier, dorsal view of head; *d*, soldier, lateral view of head.

Measurements.—

Length with wings.....	16.00–17.00 mm.
Length without wings.....	8.00– 9.50 mm.
Length of head.....	1.77– 1.92 mm.
Width of head.....	1.54– 1.61 mm.
Length of antennae.....	2.31– 2.73 mm.
Diameter of eye.....	.55– .61 mm.
Length of pronotum.....	.71– .74 mm.
Width of pronotum.....	1.36– 1.45 mm.
Length of hind tibia.....	1.86– 1.96 mm.
Length of anterior wing.....	12.50–13.95 mm.
Width of anterior wing.....	4.35– 4.49 mm.
Length of queen.....	23.00 mm.
Width of abdomen of queen.....	6.00 mm.

Comparison with other species.—The description of the imago of *N. acajutlae* is very close, but the soldier is quite different.

Soldier.—Head yellow, subglobular without nose, profile rather concave from the tip of the nose to the vertex; clothed with 4 bristles at the base of the nose and 4 on the vertex.

Antennae pale yellow, with 13 segments, the 3d longer than the 2d, the 2d equal to the 4th.

Nose light reddish brown, slender, of medium length.

Thorax same color as the head. Pronotum with minute hairs on the anterior margin and often a few bristles; front margin rounded.

Abdomen same color as the head. Tergites with a row of marginal bristles but no hair. Sternites hairy.

Measurements.—

Total length.....	4.70–5.00 mm.
Length of head.....	1.77–2.09 mm.

Measurements.—

Width of head	1.06–1.34 mm.
Length of antennae	1.51–1.64 mm.
Width of pronotum	.51– .56 mm.
Length of hind tibia	1.24–1.28 mm.

Comparison with other species.—Differs from *N. rotundatus* Holmgren in that the tergites have no hair, but only marginal bristles.

- Type locality.—Tukeit, British Guiana.
- New localities.—British Guiana: Kartabo, Dunoon.
- Range.—British Guiana.

The descriptions are based upon many winged imagos, soldiers, and four kings and queens from twenty different colonies collected by the author at Kartabo. Winged imagos and soldiers collected from two colonies at Dunoon by F. M. Gage agree with the Kartabo specimens.

Nasutitermes (*Nasutitermes*) *surinamensis* (Holmgren).
Eutermes surinamensis Holmgren (1910), p. 251 (soldier, worker), text-fig. 33 (soldier).

(Fig. 57 a, b, c, d)

Imago (queen).—Head dark, brown, oval; covered with hairs and long bristles. Fontanelle small, short, and forked at the tip.

Antennae broken, the 2d segment equal to the 3d, the 4th a little longer than the 3d.

Eyes large, not particularly prominent, fairly close to the lower margin of the head. Ocelli rather small, lying nearly flat on the head, slightly more than their diameter from the eyes.

Labrum a little lighter than the head. Postclypeus dark brown, median line absent or inconspicuous.

Pronotum dark brown, lighter in places than the head; narrower than the head, sides rounded, posterior margin deeply emarginate, angles rounded.

Posterior margins of the meso- and metanota widely emarginate, angles sharp or rounded.

Abdominal tergites dark brown.

Measurements.—

Length of head	1.96–1.99 mm.
Width of head	1.83–1.86 mm.
Diameter of eye	.55– .57 mm.
Length of pronotum	.87– .90 mm.
Width of pronotum	1.57–1.70 mm.
Length of hind tibia	1.93–2.02 mm.
Length of queen	27.00 mm.
Width of abdomen of queen	6.00 mm.

Soldier.—Head reddish brown, large, profile straight with elevation at the base of the nose hardly distinguishable; 4 bristles at the base of the nose and 2 on the vertex.

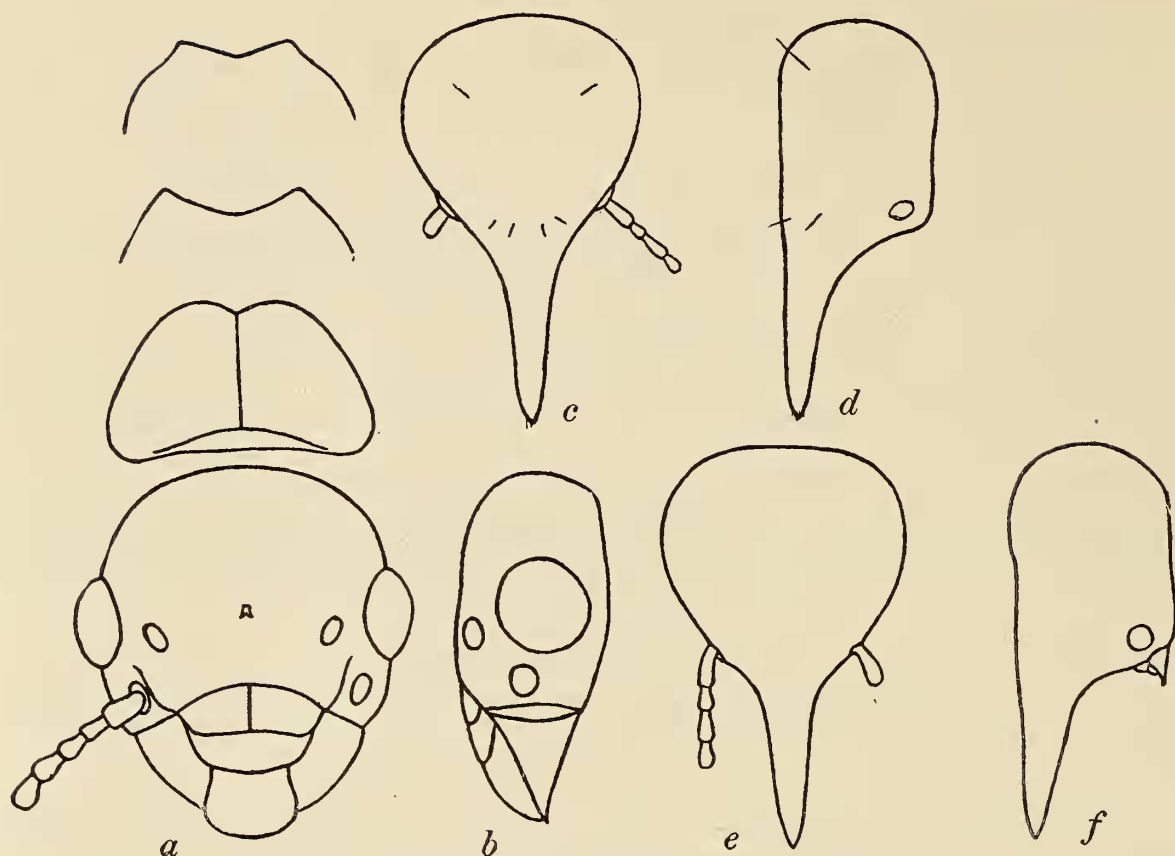


Fig. 57. *Nasutitermes* (*Nasutitermes*) *surinamensis* (Holmgren). *a*, imago, dorsal view of head, pronotum and margins of thoracic nota; *b*, imago, lateral view of head; *c*, soldier, dorsal view of head; *d*, soldier, lateral view of head.

Nasutitermes (*Nasutitermes*) *comstockae*, sp. nov. *e*, soldier, dorsal view of head; *f*, soldier, lateral view of head.

Antennae yellowish with 13 segments, the 3d longer than the 2d, the 4th equals the 2d or is somewhat longer.

Nose a little darker than the head, large and thick.

Pronotum yellowish, front margin brownish with short hairs and a few longer bristles. Legs yellowish.

Abdominal tergites yellowish, covered with long hairs and also with a row of marginal bristles.

Measurements.—

Total length	4.00–5.00 mm.
Length of head	1.65–1.83 mm.
Width of head	1.10–1.22 mm.
Length of antennae	1.80–1.90 mm.
Width of pronotum	.48–.61 mm.
Length of hind tibia	1.45–1.54 mm.

Type locality.—Surinam: Ephrata.

New localities.—British Guiana: Kartabo, Tukeit.

Range.—Surinam, British Guiana.

The description is based upon one king, two queens, and many soldiers collected by the author from seven different colonies at Kartabo. Soldiers collected from a single colony at Tukeit by Dr. F. E. Lutz agree with the Kartabo specimens.

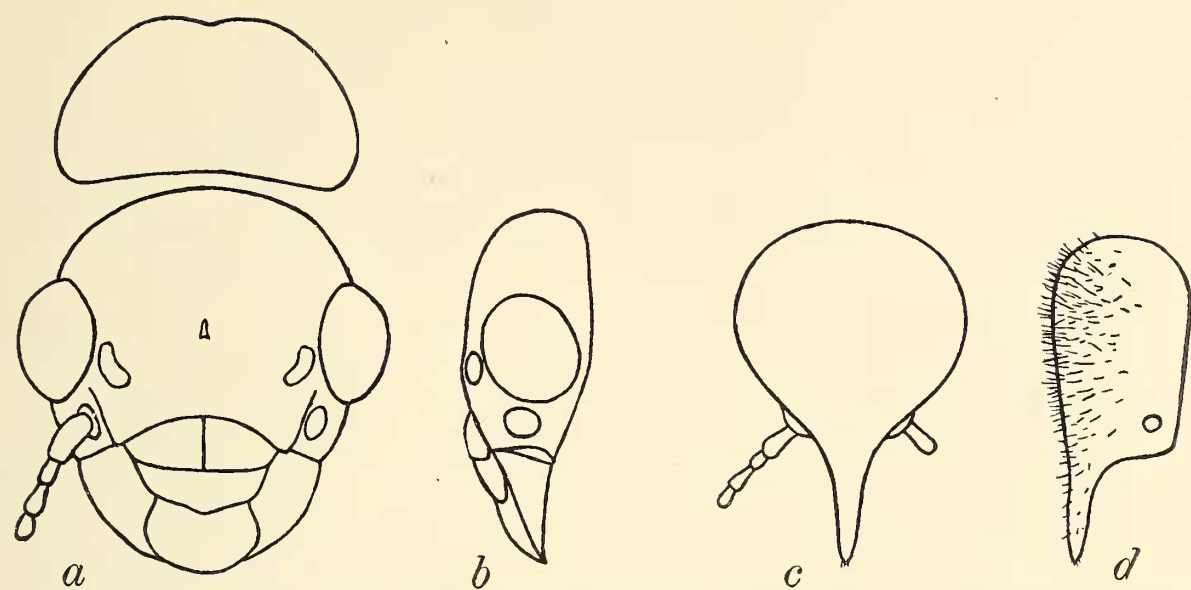


Fig. 58. *Nasutitermes* (*Nasutitermes*) *acajutlae* (Holmgren). *a*, imago, dorsal view of head and pronotum; *b*, imago, lateral view of head; *c*, soldier, dorsal view of head; *d*, soldier, lateral view of head.

Nasutitermes (*Nasutitermes*) *acajutlae* (Holmgren).

Eutermes Acajutlae Holmgren (1910), p. 262 (imago, soldier, worker),
text-fig. 42 (imago).

Nasutitermes creolina Banks (1919), p. 482, 484 (soldier only).

(Fig. 58)

Imago (queen).—Head dark brown, widely oval, covered with rather long hairs. Antennae yellow brown, the 3d segment longer than the 2d and slightly longer than the 4th.

Eyes very large and fairly prominent, very close to the lower margin of the head. Ocelli large, prominent, very close to the eyes.

Labrum yellow brown. Postclypeus yellow brown, with median line.

Pronotum yellow brown, contrasting with the head; clothed with many hairs and bristles which are thicker on the margins; angles and sides rounded, posterior margin somewhat emarginate.

Posterior margins of the meso- and metanota emarginate, angles rounded. Abdominal tergites lighter than the head.

Measurements.—

Length of head.....	2.02 mm.
Width of head.....	1.77 mm.
Diameter of eye.....	.71 mm.
Length of pronotum.....	.83 mm.
Width of pronotum.....	1.64 mm.
Length of hind tibia.....	1.80 mm.
Length of queen.....	26.50 mm.
Width of abdomen of queen.....	8.00 mm.

Soldier.—Head dark to medium dark reddish brown, lighter around the base of the antennae; thickly covered with long hairs and a few longer bristles; oval from above, profile nearly straight, slightly concave, a very slight elevation at the base of the nose.

Antennae yellowish, with 13 segments, the 3d longer than the 4th, the 4th somewhat longer than the 2d.

Nose with a few hairs; rather short and stout.

Thorax pale. Pronotum yellow, front margin brown and emarginate; covered with long hairs and a row of longer bristles on the front margin.

Legs yellow. Abdominal sternites and tergites yellow, thickly covered with long hairs in addition to rows of marginal bristles.

Measurements.—

Total length	5.00–6.00 mm.
Length of head	1.73–1.83 mm.
Width of head	1.05–1.16 mm.
Length of antennae	1.73–1.77 mm.
Width of pronotum	.61–.64 mm.
Length of hind tibia	1.38–1.51 mm.

Comparison with other species.—Distinguished from *N. pilifrons* (Holmgren) by the emarginate anterior margin of the pronotum.

Type locality.—San Salvador.

New localities.—British Guiana: Kartabo, Camaria, Dunoon; St. Croix.

Range.—British Guiana, St. Croix, St. Thomas, San Salvador.

The description is based upon a single queen and many soldiers from two different colonies collected by the author at Kartabo. Soldiers collected by the author from a single colony at Camaria, soldiers collected by F. M. Gaige from a single colony at Dunoon, two queens and many soldiers collected by the author from four colonies at St. Croix, W. I., and one queen and many soldiers collected from five different colonies by the author at St. Thomas, W. I., all agree with the Kartabo specimens.

Although the soldier of *N. creolina* Banks is undoubtedly the same species as *N. acajutlae*, the imago he describes from Monserrat does not belong with the soldier. As *N. creolina* is based on the soldier, this name must go into the synonymy of *N. acajutlae*.

Nasutitermes (*Nasutitermes*) *intermedius* Banks.

Nasutitermes intermedius Banks (1919), p. 485, 482 (soldier, worker), pl. 2, fig. 13, 25 (soldier).

(Fig. 59)

Imago.—Head rather dark brown, widely oval. Fontanelle 3-pointed, nearly as long as the ocelli or longer, no conspicuous line from the fontanelle to the posterior margin as in *N. octopolis*.

Antennae with 15 segments, the 3d sometimes showing signs of dividing.

Eyes large, very close to the lower margin of the head. Ocelli large but proportionately smaller than in *N. octopolis*, very close to the eyes.

Labrum reddish yellow. Postclypeus reddish yellow, median line faint.

Pronotum reddish yellow, much lighter than the head; hind margin not, or very weakly emarginate, sides rounded, angles rounded.

Posterior margins of the meso- and metanota not very strongly emarginate, angles fairly sharp.

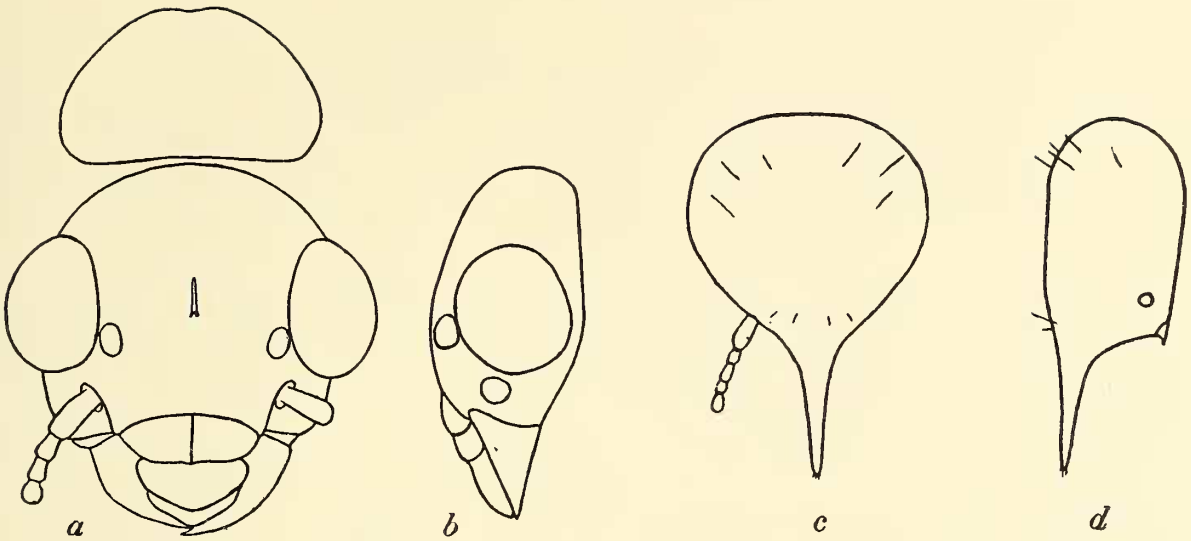


Fig. 59. *Nasutitermes* (*Nasutitermes*) *intermedius* Banks. *a*, imago, dorsal view of head and pronotum; *b*, imago, lateral view of head; *c*, soldier, dorsal view of head; *d*, soldier, lateral view of head.

Wings brownish yellow, veins darker near the base.

Abdominal tergites brown, sternites yellowish in the middle.

Measurements.—

Length with wings.....	13.50–15.00 mm.
Length without wings.....	7.00– 8.50 mm.
Length of head.....	1.45– 1.64 mm.
Width of head.....	1.38– 1.45 mm.
Length of antennae.....	1.93 mm.
Diameter of eye.....	.54– .58 mm.
Length of pronotum.....	.64– .67 mm.
Width of pronotum.....	1.09– 1.22 mm.
Length of hind tibia.....	1.48 mm.
Length of anterior wing.....	10.87–11.11 mm.
Width of anterior wing.....	3.19 mm.

Comparison with other species.—I am much inclined to believe that this species is *N. montanae* (Holmgren) as Holmgren's description is very close. However, he states (1910), that the antennae of *N. montanae* are 16-segmented while the specimens from Kartabo rarely have even an indication of a 16th segment. Also the fontanelle of the Kartabo specimens seems to be larger than in the figure of *M. montana*, so I have decided to keep the names separated until more material can be examined.

Soldier.—Head brown, roundly oval without the nose; clothed with a number of bristles, 4 at the base of the nose and from 6–10 on the vertex.

Antennae lighter than the head, with 13 segments, the 3d longer than the 2d, the 2d longer than the 4th.

Nose same color as the head, slender and of medium length.

Thorax yellow brown. Pronotum with marginal bristles and very short hairs; anterior region not particularly raised. Abdominal tergites with short hairs in addition to a row of marginal bristles. Sternites with long hair. Abdomen yellow brown.

Measurements.—

Total length.....	3.50–4.50 mm.
Length of head.....	1.54 mm.
Width of head.....	.96–1.05 mm.
Length of antennae.....	1.35–1.38 mm.
Width of pronotum.....	.46 mm.
Length of hind tibia.....	.87–.93 mm.

Comparison with other species.—Easily distinguished from *N. guayanae* by the presence of short hairs in addition to marginal bristles on the abdominal tergites. Also the nose is more slender.

Type locality.—Arepo Savanna, Trinidad.

New locality.—Kartabo, British Guiana.

Range.—British Guiana, Trinidad.

The description is based upon many winged imagos and soldiers taken from seven different colonies by the author at Kartabo. The soldiers agree perfectly with specimens from Trinidad determined by Banks.

Nasutitermes (Nasutitermes) comstockae, sp. nov.

(Fig. 57 e, f)

Soldier.—Head reddish brown, profile straight with a very slight elevation at the base of the nose; usually with 4 bristles at the base of the nose and 2 on the vertex.

Antennae yellowish, with 12–13 segments. If with 13 segments, the 3d is longer than the 4th and the 4th is somewhat longer than the 2d.

Nose darker than the head, proportionately very large and thick.

Pronotum with a few bristles and many short hairs; anterior margin brownish.

Legs yellowish. Abdomen yellowish; tergites covered with long hair and longer bristles on the margins.

Measurements.—

Total length.....	4.00–4.20 mm.
Length of head.....	1.48–1.70 mm.
Width of head.....	.80–1.00 mm.
Length of antennae.....	1.61–1.93 mm.
Width of pronotum.....	.38–.55 mm.
Length of hind tibia.....	1.25–1.35 mm.

Comparison with other species.—Close to *N. surinamensis*, but differs in the proportionately narrower head and somewhat thicker nose besides the much smaller size. Differs from *N. hubbardi* Banks in having no minute hairs on the head.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Soldier.

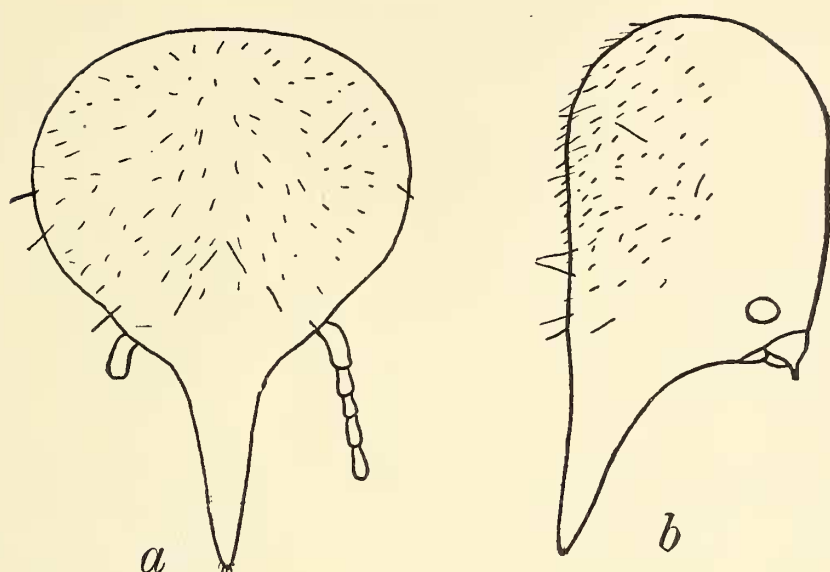


Fig. 60. *Nasutitermes* (*Nasutitermes*) *wheeleri*, sp. nov. *a*, soldier, dorsal view of head; *b*, soldier, lateral view of head.

Described from numerous specimens of soldiers collected by the author from two different colonies at Kartabo. I take pleasure in naming this species after Mrs. A. B. Comstock, to whom I owe much of my early training and enthusiasm for the study of biology.

***Nasutitermes* (*Nasutitermes*) *wheeleri*, sp. nov.**

(Fig. 60)

Winged nymph.—Antennae with 15 segments. Eyes not very large. Ocelli rather far from the eyes. Posterior margin of the pronotum conspicuously emarginate.

Soldier.—Head dark reddish brown, wide, globular; profile rather straight or slightly concave, with an elevation at the base of the nose; clothed with hairs which are shorter than those of *N. acajutlae*, longer bristles also visible, 4 at the base of the nose and 4 on the vertex.

Antennae yellowish except near the base, with 14 segments, the 3d shorter than the 2d, the 2d about as long as the 4th.

Nose about the same color as the rest of the head, of medium length and thickness, without hairs except at the tip.

Pronotum dark brown, front margin with long bristles and short hairs, somewhat emarginate. Legs brownish yellow.

Abdominal tergites dark brown, covered thickly with hair and the margins with a row of bristles. Sternites lighter.

Measurements.—

Total length.....	4.00–5.00 mm.
Length of head.....	1.64–1.80 mm.
Width of head.....	1.16–1.25 mm.
Length of antennae.....	1.93 mm.
Width of pronotum.....	.55–.61 mm.

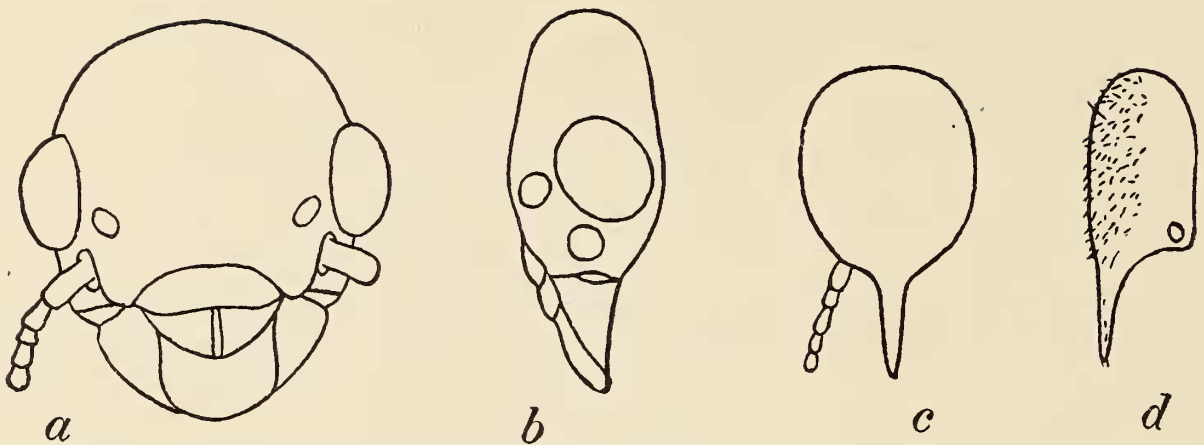


Fig. 61. *Nasutitermes* (*Nasutitermes*) *banksi*, sp. nov. *a*, imago, dorsal view of head; *b*, imago, lateral view of head; *c*, soldier, dorsal view of head; *d*, soldier, lateral view of head.

Measurements.—

Length of hind tibia 1.28–1.32 mm.

Comparison with other species.—*N. pilifrons* (Holmgren) has a lighter colored abdomen, antennae with 13 segments, and is on the average smaller. *N. arenarius* (Bates) (Holmgren) has a less hairy head. *N. acajutlae* (Holmgren) has yellow tergites and the nose has a few hairs.

The description is based upon many soldiers and winged nymphs collected by the author from a single queenless colony at Kartabo. I take pleasure in naming this species in honor of Prof. Wm. M. Wheeler, who was a constant inspiration to me during my studies at Kartabo.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Soldier.

***Nasutitermes* (*Nasutitermes*) *banksi*, nom. nov.**

. *Nasutitermes holmgreni* Banks (1918), p. 667 (soldier), *text-fig.* (soldier).

(Fig. 61)

Another species of the genus *Nasutitermes* belonging to the subgenus *Trinervitermes* was described by von Rosen (1912) from Liberia under the name *Eutermes Holmgreni*. Therefore it is necessary to change the name of the British Guiana species and I take the opportunity to name it after Mr. Nathan Banks, who first described the species.

Imago.—Head brownish black, oval, covered with hair and a few long bristles. Fontanelle inconspicuous.

Antennae with 13–14 segments. If with 13 segments, the 3d is longer than the 2d, the 2d is equal to the 4th. If with 14 segments, the 3d is very short, the 4th is shorter than the 2d and the 2d is equal to the 5th.

Eyes large, prominent and quite close to the lower margin of the head. Ocelli large, about $\frac{1}{2}$ their width removed from the eyes.

Labrum lighter than the head. Postclypeus lighter than the head, median line faint.

Pronotum brown, much lighter than the head, posterior margin emarginate.

Posterior margins of the meso- and metanota widely emarginate. Legs brownish, lighter than the prothorax.

Wings rather dark, smoky. Abdominal tergites brown. Sternites light in the middle.

Measurements.—

Length with wings	10.50–11.00 mm.
Length without wings	5.50– 6.50 mm.
Length of head	1.09– 1.16 mm.
Width of head	.96– 1.03 mm.
Length of antennae	1.28– 1.45 mm.
Diameter of eye	.32 mm.
Length of pronotum	.42– .45 mm.
Width of pronotum	.71– .80 mm.
Length of hind tibia	1.00 mm.
Length of anterior wing	8.39– 8.75 mm.
Width of anterior wing	2.36– 2.48 mm.

Soldier.—Head dark reddish brown, darkest at the base of the nose, profile convex with no elevation at the base of the nose. Top of head covered with short hairs and a few longer bristles at the base of the nose and on the vertex.

Antennae yellowish, 11–12-segmented. If with 11 segments, the 3d is much longer than the 2d or 4th and the 2d is slightly longer than the 4th. If with 12 segments, the 3d is very short, the 4th equals the 5th and the 2d is slightly longer than the 4th.

The tip of the nose is a little lighter than the rest of the head. The nose is of medium length with a few microscopical hairs scattered over it.

Thorax brown. Front margin of pronotum dark brown, not emarginate. Legs brownish yellow.

Abdominal tergites brown, lighter than the head. Sternites yellowish. Tergites covered with microscopical hair, posterior margins with a single row of long bristles.

Measurements.—

Total length	2.40–3.40 mm.
Length of head	1.06–1.26 mm.
Width of head	.67– .74 mm.
Length of antennae	.96–1.12 mm.
Width of pronotum	.29– .32 mm.
Length of hind tibia	.58– .64 mm.

Type locality.—Tukeit, British Guiana.

New locality.—Kartabo, British Guiana.

Range.—Known only from British Guiana.

The description is based upon many winged imagos and soldiers from eleven different colonies collected by the author at Kartabo, and from soldiers collected from a single colony at Kartabo by Dr. Wm. M. Wheeler.

Nasutitermes (Nasutitermes) gaigei, sp. nov.

(Fig. 62.)

Imago.—Head dark brown, a little lighter on the queen, oval; covered with hairs and a few bristles. Fontanelle fairly large and distinct, forked at the tip.

Antennae lighter than the head, with 15 segments, the 2d equals the 3d, the 4th is a little shorter but wider than the 3d.

Eyes of medium size, fairly prominent and fairly close to the lower margin of the head. Ocelli of medium size, a little less than their length removed from the eyes.

Labrum lighter than the head. Postclypeus lighter than the head and with a median line.

Pronotum nearly as dark as the head, covered with hair and a few longer bristles; sides slightly rounded, posterior margin nearly straight or rounded, very rarely slightly emarginate.

Posterior margins of meso- and metanota widely emarginate, angles rather sharp.

Wings rather dark and smoky, a light streak visible between the media and cubitus, particularly near the base.

Abdominal tergites nearly as dark as the head.

Measurements.—

Length with wings.....	9.00–9.60 mm.
Length without wings.....	5.00–6.00 mm.
Length of head.....	.96–1.06 mm.
Width of head.....	.86– .93 mm.
Length of antennae.....	1.61–1.70 mm.
Diameter of eye.....	.26– .29 mm.
Length of pronotum.....	.45– .46 mm.
Width of pronotum.....	.74– .77 mm.
Length of hind tibia.....	1.06–1.09 mm.
Length of anterior wing.....	6.85–7.45 mm.
Width of anterior wing.....	2.01–2.13 mm.
Length of queen.....	11.00 mm.
Length of king.....	4.50 mm.

Comparison with other species.—Very close to Holmgren's (1910) description of *N. longirostratus*, but *N. gaigei* is smaller in all measurements.

Soldier.—Head brownish yellow, oval, profile with a slight elevation at the base of the nose; 4 bristles at the base of the nose and 2 on the vertex.

Antennae yellowish, with 13 segments, the 3d equal to or slightly longer than the 2d, the 4th shorter than the 2d.

Mandibles with a distinct sharp point.

Nose dark brown, slender and rather long.

Thorax yellowish. Pronotum with a fringe of very short hair on the front margin, no bristles present; front margin not emarginate.

Legs yellowish. Abdomen yellowish; tergites covered with microscopical hairs and a single row of bristles on the posterior margins.

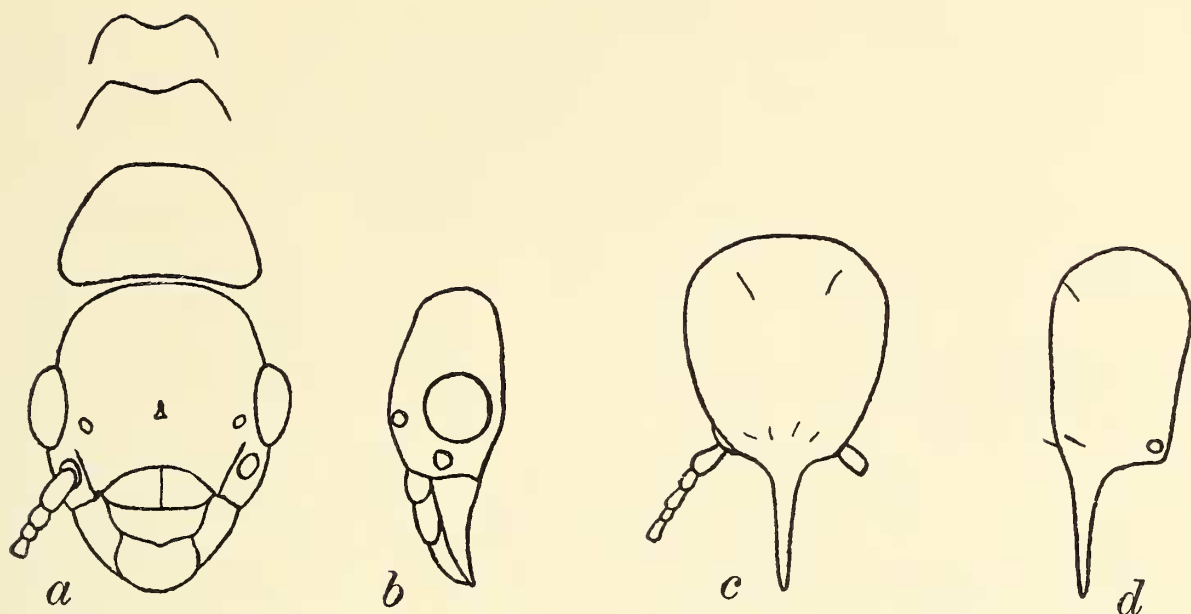


Fig. 62. *Nasutitermes (Nasutitermes) gaigei*, sp. nov. a, imago, dorsal view of head, pronotum and margins of thoracic nota; b, imago, lateral view of head; c, soldier, dorsal view of head; d, soldier, lateral view of head.

Measurements.—

Total length	3.00–3.50 mm.
Length of head	1.16–1.24 mm.
Width of head	.57–.61 mm.
Length of antennae	1.36–1.45 mm.
Width of pronotum	.32–.38 mm.
Length of hind tibia	.70–.80 mm.

Comparison with other species.—Very close to *N. longirostratus*, but smaller in all measurements.

Type locality.—Kartabo, British Guiana.

Other locality.—Dunoon, British Guiana.

Range.—Known only from British Guiana.

Holotype.—Winged imago.

Morphotype.—Soldier.

The description is based upon several winged imagos, several kings and queens and many soldiers collected by the author from ten different colonies at Kartabo, and upon several winged imagos and soldiers collected by F. M. Gaige from a single colony at Dunoon. I take pleasure in naming the species in honor of Dr. Gaige.

***Nasutitermes (Nasutitermes) brevipilus*, sp. nov.**

(Fig. 63)

Imago.—Head dark brown, oval, covered with short hair and a few long bristles. Fontanelle short, but conspicuous, forked at the tip.

Antennae with 15 segments, the 3d smaller than the 2d or 4th, the 2d equal to the 4th.

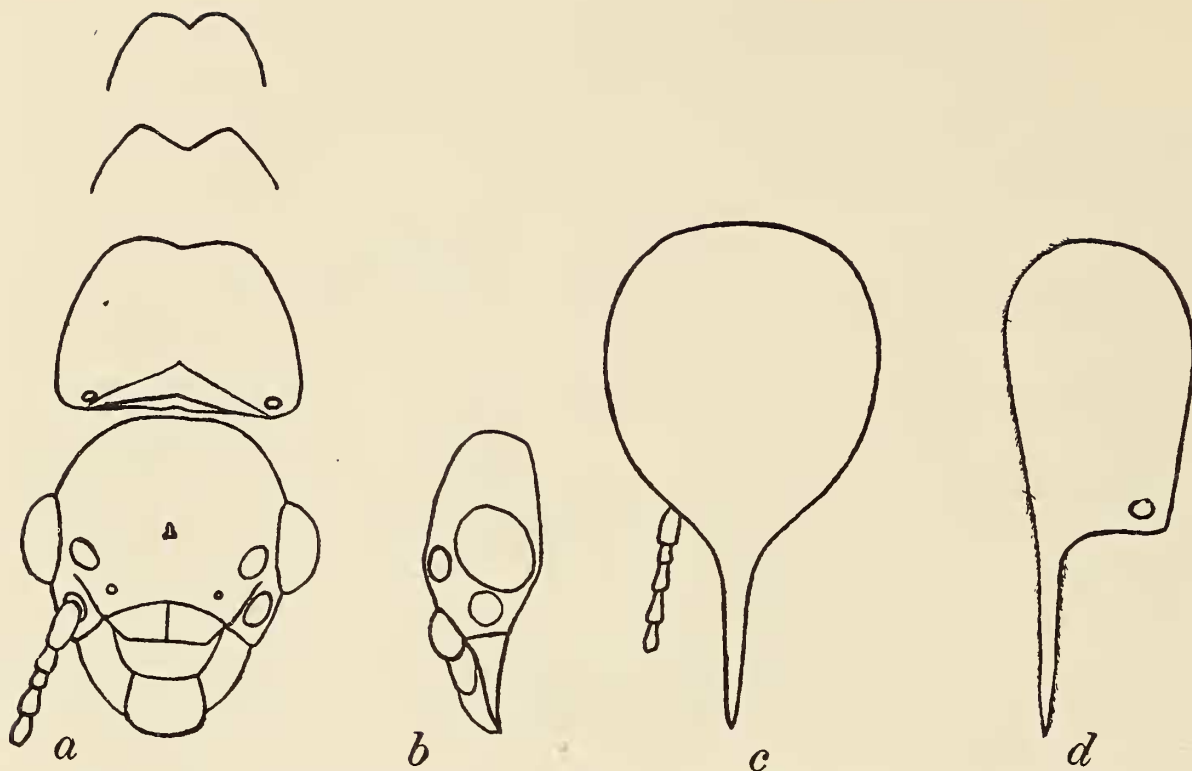


Fig. 63. *Nasutitermes* (*Nasutitermes*) *brevipilus*, sp. nov. *a*, imago, dorsal view of head, pronotum and margins of thoracic nota; *b*, imago, lateral view of head; *c*, soldier, dorsal view of head; *d*, soldier, lateral view of head.

Eyes proportionately large and prominent, close to the lower margin of head. Ocelli large and fairly close to the eyes (.033 mm. removed).

Postclypeus lighter than the head, median line rather faint.

Pronotum brown, a little lighter than the head; sides rounded, posterior margin somewhat emarginate, anterior angles fairly sharp.

Posterior margins of the meso- and metanota deeply emarginate.

Wings smoky, a light streak between the media and cubitus.

Abdominal tergites about the same color as the pronotum.

Measurements.—

Length with wings	11.50–12.00 mm.
Length without wings	6.80– 7.20 mm.
Length of head	1.10– 1.17 mm.
Width of head	.96– 1.07 mm.
Length of antennae	1.73– 1.83 mm.
Diameter of eye	.37 mm.
Length of pronotum	.48– .57 mm.
Width of pronotum	.77– .83 mm.
Length of hind tibia	1.43– 1.47 mm.
Length of anterior wing	8.80– 9.62 mm.
Width of anterior wing	2.40– 2.88 mm.

Soldier.—Head yellow, widely oval without the nose, profile concave with no elevation at the base of the nose; thickly covered with minute hairs and a few short bristles at the base of the nose and on the vertex.

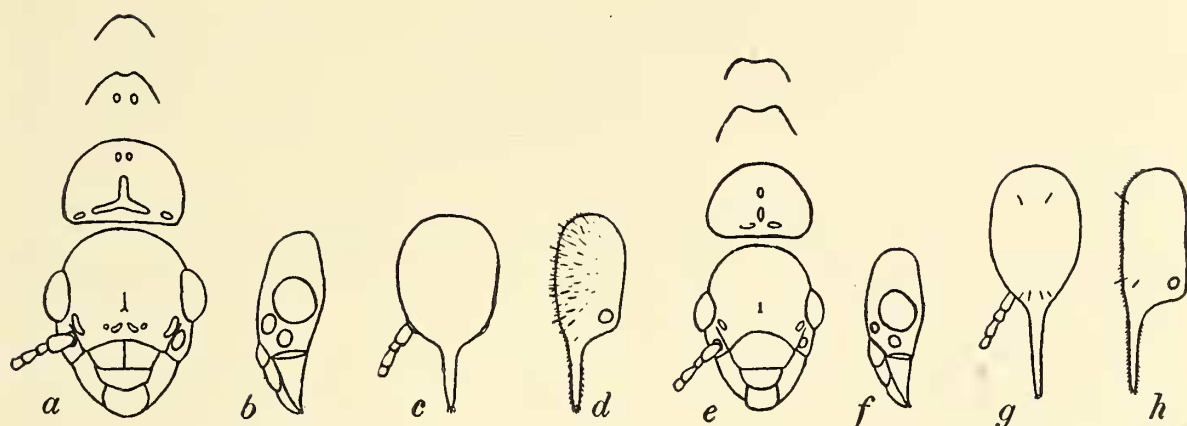


Fig. 64. *Nasutitermes* (*Subulitermes*) *parvellus* (Silvestri). *a*, imago, dorsal view of head, pronotum and margins of thoracic nota; *b*, imago, lateral view of head; *c*, soldier, dorsal view of head; *d*, soldier, lateral view of head.

Nasutitermes (*Subulitermes*) *baileyi*, sp. nov. *e*, imago, dorsal view of head, pronotum and margins of thoracic nota; *f*, imago, lateral view of head; *g*, soldier, dorsal view of head; *h*, soldier, lateral view of head.

Antennae with 12 segments, the 2d shorter than the 3d, the 3d equal to the 4th. Mandibles with a distinct point.

Nose slightly darker than the rest of the head, very slender and quite long.

Pronotum yellow with minute hairs on the margins; anterior region sharply raised.

Abdomen the color of the contents of the intestines. Tergites covered with short hairs and a row of short bristles on the posterior margins.

Measurements.—

Total length.....	4.00–4.30 mm.
Length of head.....	1.35–1.70 mm.
Width of head.....	.64–.73 mm.
Length of antennae.....	1.15–1.40 mm.
Width of pronotum.....	.43–.46 mm.
Length of hind tibia.....	.86–.96 mm.

Comparison with other species.—Differs from all other New World species of this subgenus in having very short hair on the head and the profile concave with a long and slender nose.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Imago.

Morphotype.—Soldier.

Described from many winged imagos and soldiers collected by the author from five different colonies at Kartabo.

Subgenus *Subulitermes* Holmgren

Including the species described in this report, this subgenus now comprises fifteen species which are rather widely distributed. There are four species reported from the Oriental region, two from Africa, one from Australia and eight from the Neotropical region. The species are usually rather small and inconspicuous and it is my belief that many forms of the group will ultimately be discovered.

Six species were found in British Guiana and all seem to be new with the exception of one species recently described by Silvestri. Several of these species have slight constrictions of the head and I believe that some of the small species described by Banks and included in the genus *Constrictotermes* may belong to this subgenus.

Holmgren (1910) described a species of this subgenus under the name *Eutermes incola*. Wasmann (1893) had already described a species under the name *Eutermes incola* which is now placed in the genus *Capritermes*. Therefore *Eutermes incola* Holmgren must be given a new name. I suggest the name *Nasutitermes* (*Subulitermes*) *thompsonae*, new name for this species in honor of the late Prof. Caroline B. Thompson of Wellesley College, who has added much to our knowledge of termite morphology.

***Nasutitermes* (*Subulitermes*) *baileyi*, sp. nov.**

(Fig. 64 e, f, g, h)

Imago.—Head dark brown, oval, narrow; covered with very short hairs and a few longer bristles. Fontanelle very small, slit-shaped and forked at the tip.

Antennae dark, with 14 segments, the 3d longer than the 2d, the 4th slightly shorter than the 2d.

Eyes fairly large, rather close to the lower margin of the head. Ocelli of medium size, less than half their length removed from the eyes.

Labrum light. Postclypeus nearly as dark as the head, large, median line absent, posterior border strongly curved.

Pronotum nearly as dark as the head, semicircular in outline; sides and posterior margin making an even curve without an emargination; a T-shaped series of marks in the middle.

Posterior margins of the meso- and metanota widely emarginate.

Wings dark smoky with a lightish streak between the media and cubitus, radius and first few branches of the cubitus dark. Abdominal tergites dark.

Measurements.—

Length with wings	8.50–9.00 mm.
Length without wings	5.00–6.00 mm.
Length of head	.80– .86 mm.
Width of head	.64– .69 mm.
Length of antennae	1.33–1.38 mm.
Diameter of eye	.20 mm.
Length of pronotum	.40– .43 mm.
Width of pronotum	.57– .61 mm.
Length of hind tibia	.94– .97 mm.
Length of anterior wing	5.69–6.40 mm.
Width of anterior wing	1.53–1.64 mm.

Comparison with other species.—Differs from *N. microsoma* in the darker color, smaller fontanelle and smaller pronotum.

Soldier.—Head yellow with reddish brown nose, profile straight with a

slight elevation at the base of the nose, oval from above without the nose; covered with short hair and also with 4 rather short bristles at the base of the nose and 2 on the vertex.

Antennae with 11 segments, the 3d longer than the 2d, the 2d equal to the 4th.

Nose darker than the head, long and slender, covered with short hair.

Pronotum pale yellow. Abdominal tergites with short hair and very short marginal bristles which are only a little longer than the hair. Abdomen pale yellow.

Measurements.—

Total length	2.70–3.50 mm.
Length of head	1.03–1.12 mm.
Width of head	.45–.48 mm.
Length of antennae	.86–1.00 mm.
Width of pronotum	.30 mm.
Length of hind tibia	.50 mm.

Comparison with other species.—Close to *N. microsoma*, but the soldier is smaller.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Winged imago.

Morphotype.—Soldier.

The descriptions are based upon many winged imagos, a single king and queen, and many soldiers collected from six different colonies at Kartabo by the author.

The species is named in honor of Dr. I. W. Bailey of Bussey Institution, who helped me considerably in my work on termites at Kartabo.

Nasutitermes (Subulitermes) parvellus Silvestri.

Eutermes parvellus Silvestri (1923), p. 307 (imago, soldier, worker), pl. XI (imago, soldier).

(Fig. 64 a, b, c, d)

Imago.—Head brown, speckled minutely, lighter on the sides and around the antennae; oval; covered with fairly long hairs. Fontanelle slit-shaped, about as long as the ocelli, forked at the tip. Muscle insertions conspicuous.

Antennae pale, with 14 segments, the 2d, 3d, and 4th equal or the 3d slightly longer than the others.

Eyes fairly large, not particularly prominent, very close to the lower margin of the head. Ocelli proportionately large, close to the eyes.

Labrum pale. Postclypeus pale, with a median line.

Pronotum lighter than the head, a T-shaped light mark in the middle; half-moon-shaped, sides and posterior margin forming a perfect curve.

Posterior margins of meso- and metanota minutely emarginate, sides strongly converging.

Wings pale smoky, costal margin light near the apex, radius dark near the base.

Abdominal tergites same color as the pronotum

Measurements.—

Length with wings	9.00–10.00 mm.
Length without wings	6.00– 6.50 mm.
Length of head	.90 mm.
Width of head	.73– .77 mm.
Length of antennae	1.17– .138 mm.
Diameter of eye	.27 mm.
Length of pronotum	.33– .40 mm.
Width of pronotum	.53– .57 mm.
Length of hind tibia	.80 mm.
Length of anterior wing	6.56– 7.00 mm.
Width of anterior wing	1.77– 1.90 mm.

Soldier.—Head yellow, oval, profile flatly convex; covered with small hairs, longer hairs on the forehead and vertex.

Antennae pale, with 12 segments, the 3d longer than the 2d, the 2d equal to the 4th.

Nose dark, straight and slender, covered with small hairs.

Pronotum pale. Abdomen pale; tergites covered with long hairs, posterior margins with a single row of bristles.

Measurements.—

Total length	2.30–4.00 mm.
Length of head	.95–1.03 mm.
Width of head	.53– .57 mm.
Length of antennae	.86–1.00 mm.
Width of pronotum	.31 mm.
Length of hind tibia	.52– .57 mm.

Comparison with other species.—Differs from *N. microsoma* and *N. thompsonae* in having comparatively long hair on the head and abdominal tergites.

Type locality.—British Guiana: Kartabo.

New localities.—British Guiana: Potaro River, Dunoon; Trinidad: Port of Spain.

Range.—British Guiana, Trinidad.

The description is based upon many winged imagos and soldiers collected from nine different colonies at Kartabo by the author. Soldiers collected from a single colony at Dunoon by F. M. Gaige and soldiers collected from three different colonies at Trinidad by the author agree with the Kartabo specimens.

***Nasutitermes (Subulitermes) oculatissimus*, sp. nov.**

(Fig. 65)

Imago.—Head dark brown, oval; covered with rather long hair and a few long bristles. Fontanelle slit-shaped, forked at the tip.

Antennae with 14 segments, the 3d a little longer than the 2d, the 4th shorter than the 2d.

Eyes very large and prominent, very close to the lower margin of the head. Ocelli very large and prominent, very close to the eyes.

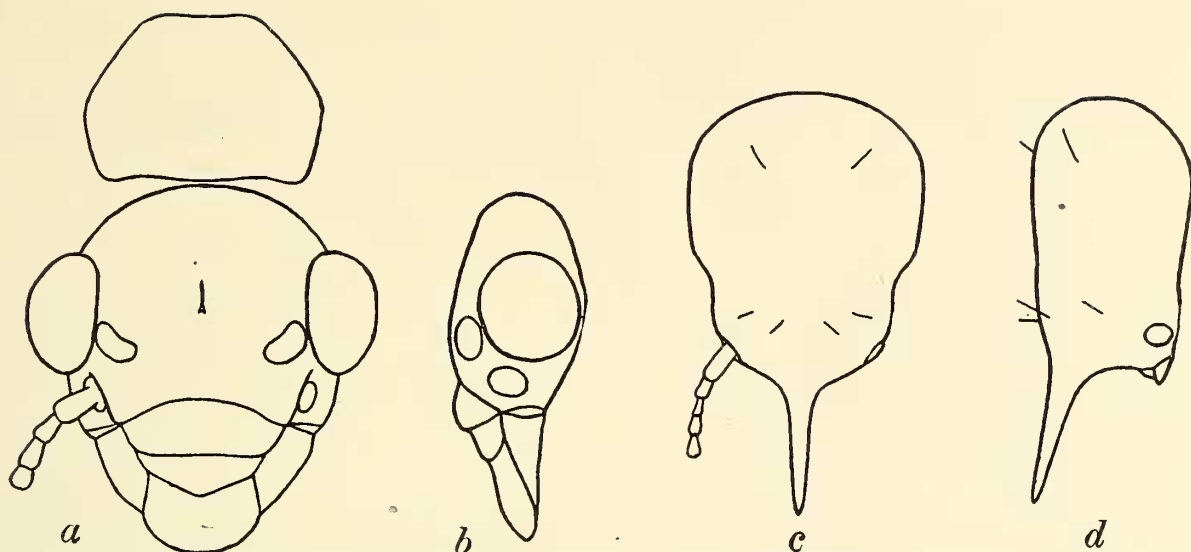


Fig. 65. *Nasutitermes* (*Subulitermes*) *oculatissimus*, sp. nov. a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, soldier, dorsal view of head; d, soldier, lateral view of head.

Labrum brownish yellow. Postclypeus a little lighter than the head, median line inconspicuous.

Pronotum same color as the postclypeus, sides somewhat angular, anterior angles rather sharp, posterior margin nearly straight.

Posterior margins of the meso- and metanota rather widely emarginate.

Wings dark smoky, a light streak between the media and cubitus.

Abdominal tergites about the same color as the pronotum.

Measurements.—

Length with wings.....	9.50–10.00 mm.
Length without wings.....	5.00– 6.00 mm.
Length of head.....	1.00– 1.03 mm.
Width of head.....	.90 mm.
Length of antennae.....	1.80 mm.
Diameter of eye.....	.33 mm.
Length of pronotum.....	.50 mm.
Width of pronotum.....	.73 mm.
Length of hind tibia.....	1.20– 1.23 mm.
Length of anterior wing.....	8.50 mm.
Width of anterior wing.....	2.50 mm.

Comparison with other species.—Differs from *N. osborni* in being smaller and the ocelli are much larger. The eyes are proportionately as large as in *N. osborni*.

Soldier.—Head yellow, oval from above, with a conspicuous constriction behind the base of the antennae, profile with a slight indentation in the middle, fairly straight; 4 bristles at the base of the nose and 2 on the vertex, no short hairs present.

Antennae with 12 segments, the 3d smaller than the 2d, the 2d equal to the 4th. Mandibles without sharp points.

Nose brown, of medium length and slender, slightly pointed up in the profile; without hair except at the tip.

Thorax pale. Abdomen the color of the contents of the intestines; tergites with a row of bristles on the posterior margins and a few inconspicuous microscopical hairs scattered over the surface.

Measurements.—

Total length	3.00–3.30 mm.
Length of head	1.13–1.16 mm.
Width of head	.57 mm.
Length of antennae	1.23 mm.
Width of pronotum	.37 mm.
Length of hind tibia	.77–.80 mm.

Comparison with other species.—Nose proportionately shorter than in *N. osborni* and profile with a more conspicuous elevation at the base of the nose.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Winged imago.

Morphotype.—Soldier.

The description is based upon several winged imagos and numerous soldiers collected from a single colony by the author at Kartabo.

***Nasutitermes (Subulitermes) raripilus*, sp. nov.**

(Fig. 66)

Imago (queen).—Head dark brown, widely oval, covered with long bristles and hairs. Fontanelle about as long as the ocelli, forked at the tip.

The 2d, 3d, and 4th segments of the antennae about equal in length, the 3d narrowest and just dividing from the 4th.

Eyes prominent, fairly large, close to the lower margin of the head. Ocelli large and prominent, about $\frac{2}{3}$ their length from the eyes.

Labrum yellow brown. Postclypeus somewhat lighter than the head, median line present.

Pronotum nearly as dark as the head, an indistinct T-shaped light mark in the middle; relatively wide, sides only slightly rounded, posterior margin nearly straight, posterior angles rather sharply rounded.

Posterior margins of meso- and metanota widely emarginate.

Abdominal tergites about the same color as the pronotum.

Measurements.—

Length of head	1.08 mm.
Width of head	1.03 mm.
Diameter of eye	.30 mm.
Length of pronotum	.52 mm.
Width of pronotum	.87 mm.
Length of hind tibia	1.17 mm.

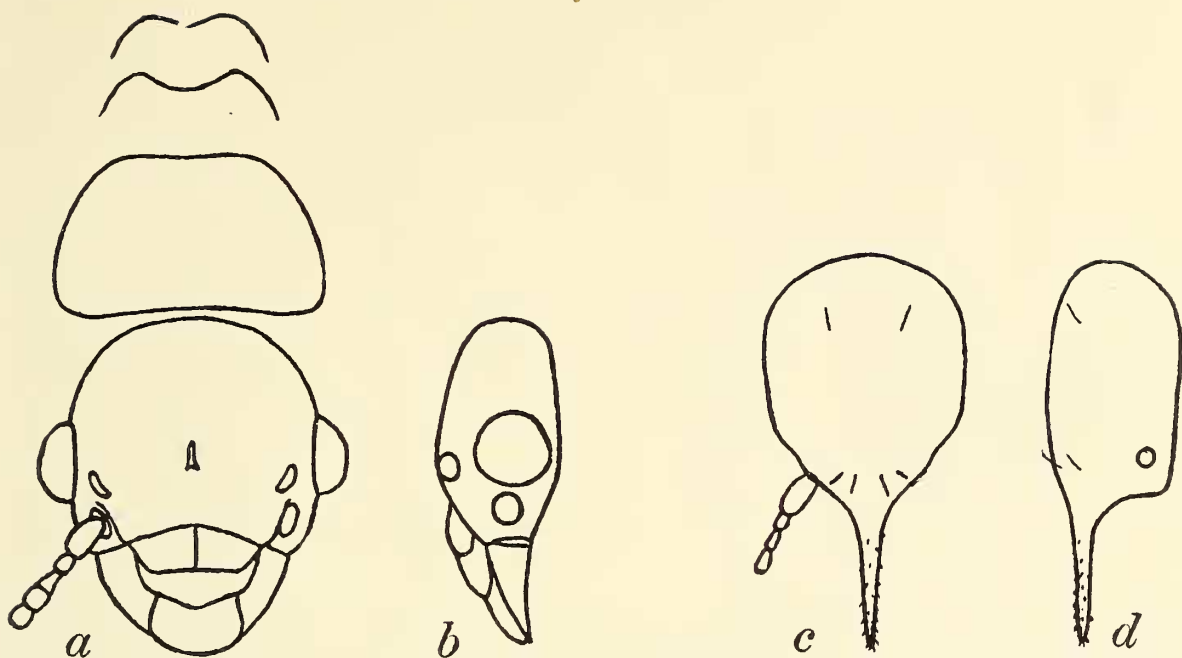


Fig. 66. *Nasutitermes* (*Subulitermes*) *raripilus*, sp. nov. *a*, imago, dorsal view of head, pronotum and margins of thoracal nota; *b*, imago, lateral view of head; *c*, soldier, dorsal view of head; *d*, soldier, lateral view of head.

Measurements.—

Length of queen 16.00 mm.

Width of abdomen of queen 3.00 mm.

Soldier.—Head yellow, oval from the top with a slight constriction in back of the base of the antennae, profile from base of nose to rear margin convex; smooth except for 4 bristles at base of nose and 2 on the vertex.

Antennae with 11–12 segments, the first segments variable in size.

Nose brown, slender and long, end covered with microscopical hairs.

Thorax pale. Pronotum with short hairs and a few long bristles on the front margin.

Abdominal tergites with very short hairs and a row of marginal bristles; pale.

Total length 3.50–4.50 mm.

Length of head 1.22–1.38 mm.

Width of head69–.77 mm.

Length of antennae 1.22–1.33 mm.

Width of pronotum43 mm.

Length of hind tibia73–.75 mm.

Comparison with other species.—Differs from *N. thompsonae* and *N. microsoma* in the head not being clothed with microscopical hairs.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Queen.

Morphotype.—Soldier.

The description is based upon a single queen and numerous soldiers collected from two different colonies by the author at Kartabo.

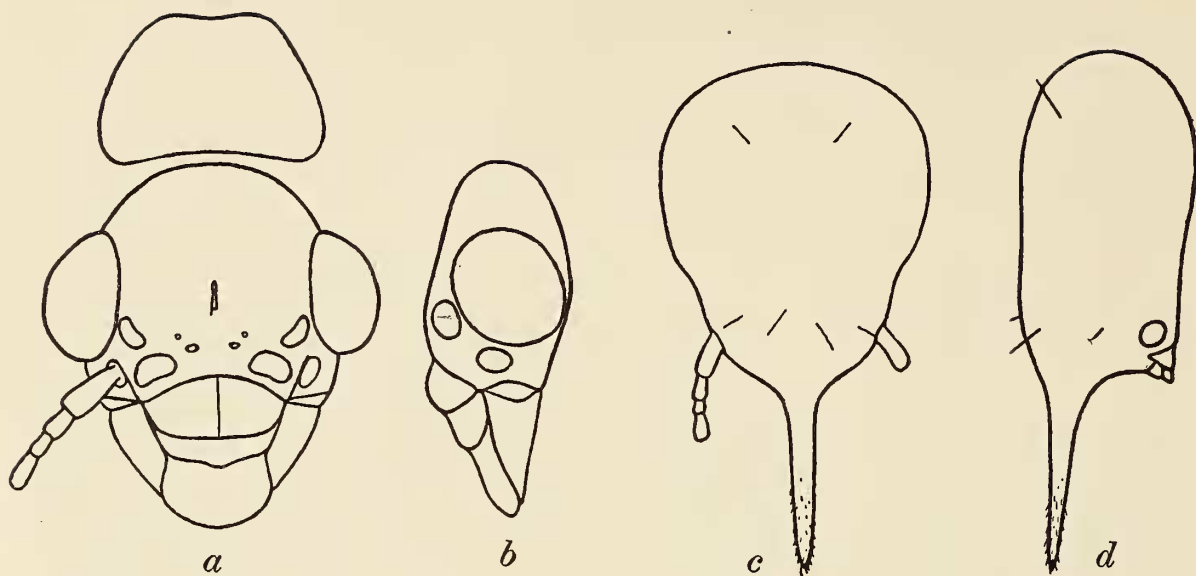


Fig. 67. *Nasutitermes* (*Subulitermes*) *osborni*, sp. nov. a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, soldier, dorsal view of head; d, soldier, lateral view of head.

Nasutitermes (*Subulitermes*) *osborni*, sp. nov.

(Fig. 67)

Imago (queen).—Head dark brown, oval. Fontanelle slit-shaped, about the same length as the ocelli. Muscle insertions rather plain.

The 3d segment of the antennae nearly equal to the 2d, the 4th longer than the 2d.

Eyes very large and very close to the lower margin of the head. Ocelli large, very close to the eyes.

Postclypeus conspicuously lighter than the head, median line distinct.

Pronotum lighter than the head; sides slightly rounded, anterior angles rather sharp, posterior margin nearly straight, somewhat concave.

Posterior margins of the meso- and metanota widely concave.

Abdominal tergites about the same color as the pronotum.

Measurements.—

Length of head	1.17 mm.
Width of head	1.07 mm.
Diameter of eye	.43 mm.
Length of pronotum	.57 mm.
Width of pronotum	.83 mm.
Length of hind tibia	1.44 mm.
Length of queen	6.20 mm.

Comparison with other species.—A little larger than *N. oculatissimus* and the ocelli smaller. Eye very much larger than in *N. raripilus*.

Soldier.—Head yellow, egg-shaped from above, with a small constriction in back of the base of the antennae, profile convex with only a slight indentation

in the middle; 4 bristles at the base of the nose and 2 on the vertex, no small hairs visible.

Antennae with 12 segments, the 3d much smaller than the 2d, the 2d equal to the 4th. The 3d segment just dividing from the 4th. Mandibles with no point present.

Nose brown, long and slender, not turned up in profile; small hairs at the tip of the nose and along the outer end.

Thorax pale. Abdomen the color of the intestinal contents. Tergites with a marginal row of bristles and covered with very minute hairs.

Measurements.—

Total length	3.20–3.35 mm.
Length of head	1.30–1.33 mm.
Width of head	.63–.67 mm.
Length of antennae	1.27 mm.
Width of pronotum	.40–.41 mm.
Length of hind tibia	.67–.77 mm.

Comparison with other species.—Nose longer and proportionately more slender than in *N. oculatissimus*, elevation at the base of the nose not so conspicuous in profile. So close to *N. raripilus* that I have found no good character to distinguish them apart. *N. osborni* is generally a little smaller, but the largest specimens of *N. osborni* seem to be about the same as the smallest of *N. raripilus*.

Type locality.—Cow Island, British Guiana (Bartica District).

Range.—Known only from the type locality.

Holotype.—Queen.

Morphotype.—Soldier.

The description is based upon a single queen and numerous soldiers collected from a single colony by the author at Cow Island, about six miles from Kartabo, near Bartica.

I have named the species after Prof. Henry Fairfield Osborn, President of the New York Zoological Society, whose interest and encouragement has made possible the founding and the continuation of the Tropical Research Station of the Society at Kartabo.

Nasutitermes (Subulitermes) snyderi, sp. nov.

(Fig. 68)

Imago.—Head dark brown, oval; covered with hair and a few bristles. Fontanelle slit-shaped and forked at the tip.

Antennae rather dark, with 14 segments, the 2d slightly larger than the 3d, the 3d about equal to the 4th.

Eyes rather large and prominent, close to the lower margin of the head. Ocelli proportionately rather large, less than $\frac{1}{2}$ their diameter from the eye.

Labrum light. Postclypeus nearly as dark as the head.

Pronotum nearly as dark as the head, hind margin not emarginate, sides and angles rounded.

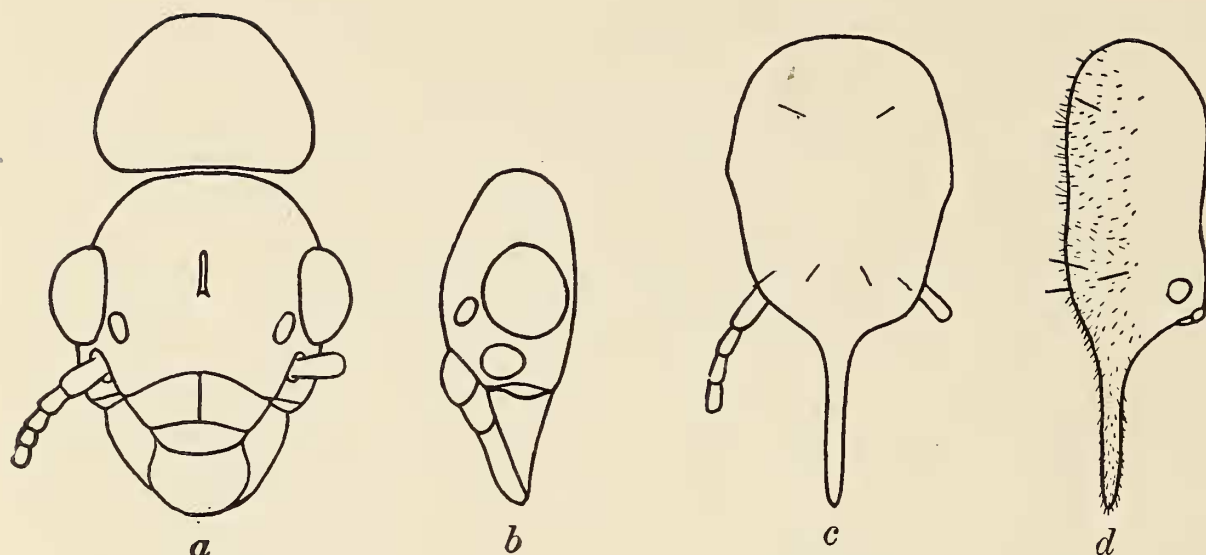


Fig. 68. *Nasutitermes* (*Subulitermes*) *snyderi*, sp. nov. *a*, imago, dorsal view of head and pronotum; *b*, imago, lateral view of head; *c*, soldier, dorsal view of head; *d*, soldier, lateral view of head.

Posterior margins of the meso- and metanota widely emarginate. Wings dark smoky, a light streak between the media and cubitus. Abdominal tergites about as dark as the pronotum.

Measurements.—

Length with wings	7.00–8.00 mm.
Length without wings	3.50–4.50 mm.
Length of head	.76– .80 mm.
Width of head	.67– .70 mm.
Length of antennae	1.33 mm.
Diameter of eye	.23 mm.
Length of pronotum	.37– .40 mm.
Width of pronotum	.50– .53 mm.
Length of hind tibia	.83 mm.
Length of anterior wing	6.56 mm.
Width of anterior wing	1.83 mm.

Soldier.—Head yellow, oval from above, with a very slight constriction behind the base of the antennae, profile from the base of the nose to the vertex roughly convex with a slight indentation in the middle; covered with small hairs and a few longer bristles at the base of the nose and on the vertex.

Antennae with 11 segments, the 2d, 3d, and 4th about equal.

Mandibles without sharp points.

Nose brownish yellow, straight and slender, covered with minute hairs.

Abdomen the color of the contents of the intestines; tergites with a row of marginal bristles and covered with fairly long hair.

Measurements.—

Total length	2.50–2.80 mm.
Length of head	.90– .93 mm.
Width of head	.40– .43 mm.

Measurements.—

Length of antennae	.83- .87 mm.
Width of pronotum	.30 mm.
Length of hind tibia	.50- .53 mm.

Comparison with other species.—Seems to be fairly close to Banks' (1919) description of "*Constrictotermes*" *flaveolus*, but differs in being smaller and in having hairs all along the nose; also, the shape of the head is different.

Remarks.—Banks (1919) has placed similar species in *Constrictotermes* on account of the slight constriction. I am not of the opinion, however, that the constriction is of such fundamental importance as a subgeneric or generic character, especially in this group, where the constriction is often so slight that it is not easily distinguished. Certainly the differences between such species as *N. cavifrons* Holmgren and *N. snyderi* are very much more obvious than between *N. parvellus* and *N. snyderi*. The characters in the mandibles given by Holmgren seem to me to be of greater significance.

Type locality.—Kartabo, British Guiana.

Other locality.—Port of Spain, Trinidad.

Range.—British Guiana, Trinidad.

Holotype.—Winged imago.

Morphotype.—Soldier.

Described from numerous winged imagos and soldiers collected from two different colonies at Kartabo, and from numerous soldiers collected from a single colony by the author at Trinidad.

The species is named in honor of Dr. Thomas E. Snyder of the Bureau of Entomology in Washington, who has done such excellent work on the biology of the North American termites.

Subgenus *Convexitermes* Holmgren

This subgenus has formerly included only two species described by Holmgren (1906) from Peru. I was therefore somewhat surprised to find a series of four species at Kartabo including three new species. The other seems to conform with a species already described from Peru. This subgenus, as in the case of *Subulitermes*, is also composed of small, rather inconspicuous species, which the ordinary observer would not find. It is to be expected, therefore, that numerous other species of the group will be discovered when more careful work is done in South America.

Nasutitermes (*Convexitermes*) *nigricornis* (Holmgren).

Eutermes nigricornis Holmgren (1906), p. 600 (soldier, worker), *text-fig.* Y' (soldier), *text-fig.* Z' (worker).
Eutermes nigricornis Holmgren (1910), p. 218, 297 (soldier, worker), *text-fig.* 67 (soldier).

(Fig. 69)

Imago.—Head brown, not very dark, oval. Fontanelle slit-shaped. 4 muscle insertions in a curved row in front of the fontanelle and 2 large ones in front of the ocelli.

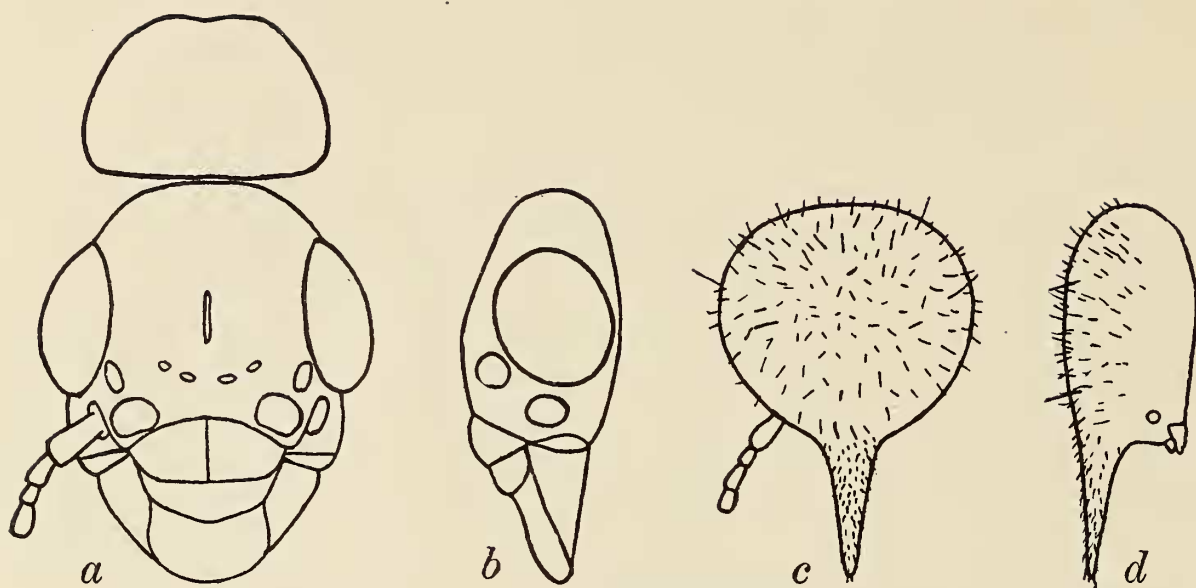


Fig. 69. *Nasutitermes* (*Convexitermes*) *nigricornis* (Holmgren). *a*, imago, dorsal view of head and pronotum; *b*, imago, lateral view of head; *c*, soldier, dorsal view of head; *d*, soldier, lateral view of head.

3d segment of the antennae very small, the 2d equals the 4th.

Eyes very large and very close to the lower margin of the head. Ocelli fairly large, much less than $\frac{1}{2}$ their width from the eyes.

Postclypeus brownish yellow, much lighter than the head, median line rather faint.

Pronotum lighter than the head, sides somewhat rounded, posterior margin slightly emarginate.

Posterior margins of meso- and metanota widely emarginate.

Abdominal tergites pale, lighter than the pronotum.

Measurements.—

Length of head	1.07 mm.
Width of head	.87- .90 mm.
Diameter of eye	.40 mm.
Length of pronotum	.50 mm.
Width of pronotum	.73- .76 mm.
Length of hind tibia	1.37-1.40 mm.
Length of queen	18.00 mm.
Width of abdomen of queen	4.00 mm.

Soldier.—Head yellow, round from above, profile convex; covered with fairly long hairs and a few long bristles.

Antennae with 11 segments, the 3d longer than the 4th, the 4th a little longer than the 2d.

Nose brownish, darker than the head, conical, thick at the base, but not nearly so much so as *N. kartaboensis*; covered with short hairs.

Pronotum pale. Abdomen the color of the intestinal contents. Tergites covered with long hair and the posterior margins with a row of bristles.

Measurements.—

Total length	3.50-3.70 mm.
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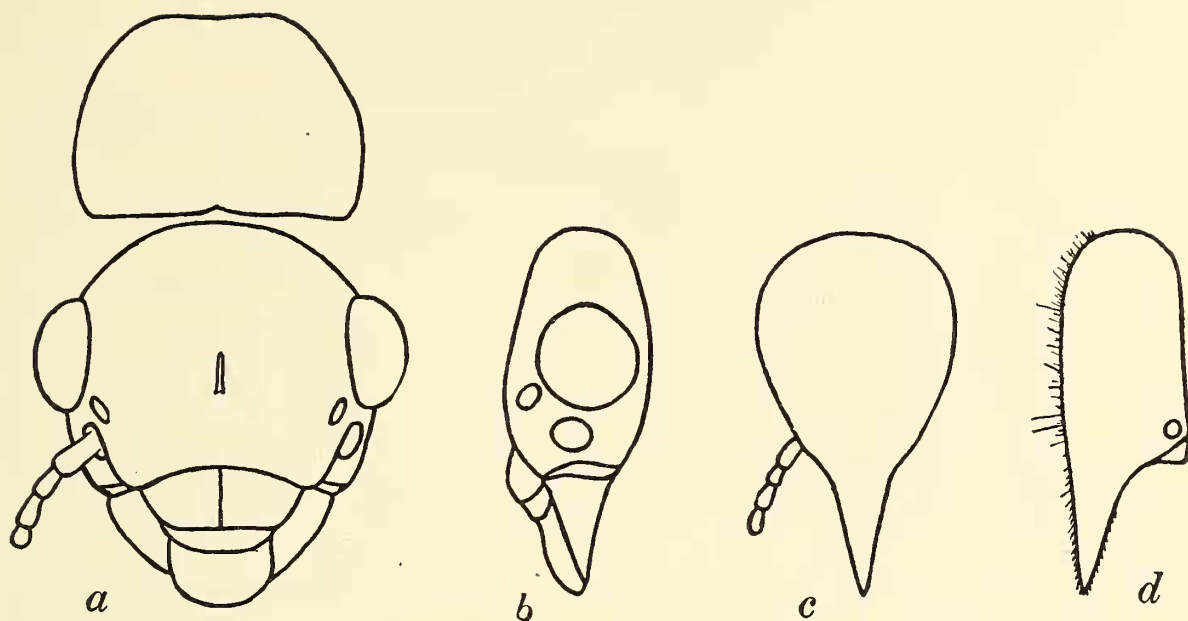


Fig. 70. *Nasutitermes (Convexitermes) kartaboensis*, sp. nov. *a*, imago, dorsal view of head and pronotum; *b*, imago, lateral view of head; *c*, soldier, dorsal view of head; *d*, soldier, lateral view of head.

Measurements.—

Length of head.....	1.25–1.35 mm.
Width of head.....	.80–.82 mm.
Length of antennae.....	1.16 mm.
Width of pronotum.....	.43 mm.
Length of hind tibia.....	.73–.77 mm.

Remarks.—Seems to conform with Holmgren's description in detail. The longer bristles on the head, however, stand out more than in Holmgren's figure.

Type locality.—Chaquimayo (Carabaya), Peru.

New locality.—Kartabo, British Guiana.

Range.—Peru, British Guiana.

The description is based upon a king and queen and many soldiers taken from two different colonies at Kartabo by the author.

***Nasutitermes (Convexitermes) kartaboensis*, sp. nov.**

(Fig. 70)

Imago.—Head dark brown, oval. Fontanelle slit-shaped and forked at the tip.

Antennae with 14 segments, the 2d equals the 3d, the 4th is shorter than the 3d.

Eyes fairly large and prominent, fairly close to the lower margin of the head. Ocelli of medium size, usually a little more than $\frac{1}{2}$ their width from the eyes.

Postclypeus slightly lighter than the head, median line faint or absent.

Pronotum slightly lighter than the head, sides somewhat rounded, posterior margin nearly straight, anterior angles fairly sharp.

Posterior margins of the meso- and metanota widely concave.

Wings smoky, conspicuously larger than in *N. mazaruniensis*.
Abdominal tergites about the same color as the pronotum.

Measurements.—

Length with wings.....	9.00–10.00 mm.
Length without wings.....	5.00– 6.00 mm.
Length of head.....	.93– .97 mm.
Width of head.....	.83– .85 mm.
Length of antennae.....	1.43– 1.47 mm.
Diameter of eye.....	.27– .29 mm.
Length of pronotum.....	.46– .47 mm.
Width of pronotum.....	.70– .73 mm.
Length of hind tibia.....	1.03– 1.07 mm.
Length of anterior wing.....	7.70– 7.87 mm.
Width of anterior wing.....	2.26– 2.33 mm.

Comparison with other species.—Pronotum slightly larger than in *N. mazaruniensis* and the wings conspicuously longer.

Soldier.—Head yellow, egg-shaped from above, with a very slight constriction in back of the base of the antennae, profile fairly straight or slightly convex; head covered with rather long hairs and a few longer bristles.

Antennae with 11 segments, the 2d equals the 4th, the 3d a little longer than the 2d.

Nose dark brown, contrasting more with the rest of the head than in *N. mazaruniensis*. Nose rather thick at the base, cone-shaped and covered with short hairs.

Pronotum pale. Abdomen the color of the intestinal contents. Tergites covered with rather long hairs and with a row of bristles on the posterior margins.

Measurements.—

Total length.....	3.30–3.50 mm.
Length of head.....	1.07 mm.
Width of head.....	.55– .57 mm.
Length of antennae.....	.93 mm.
Width of pronotum.....	.36 mm.
Length of hind tibia.....	.53– .57 mm.

Comparison with other species.—Close to *N. nigricornis*, but much smaller, and the head has a slight constriction which is not present in *N. nigricornis*. Very close to *N. mazaruniensis* and I have been unable to find any good character to separate the soldiers. Every case examined, however, showed that *N. kartaboensis* had a little darker nose than did *N. mazaruniensis*.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Winged imago.

Morphotype.—Soldier.

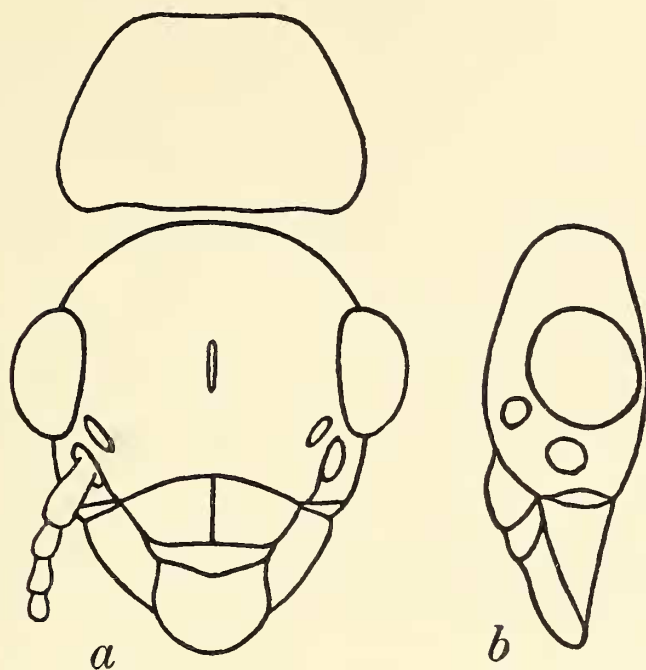


Fig. 71. *Nasutitermes (Convexitermes) mazaruniensis*, sp. nov. *a*, imago, dorsal view of head and pronotum; *b*, imago, lateral view of head.

The description is based upon many winged imagos and several soldiers from Kartabo collected by the author from three different colonies.

***Nasutitermes (Convexitermes) mazaruniensis*, sp. nov.**

(Fig. 71)

Imago.—Head dark brown, oval. Fontanelle slit-shaped, forked at the tip.

Antennae with 14 segments, the 3d equals the 2d, the 4th is shorter than the 3d.

Eyes fairly large and prominent, and fairly close to the lower margin of the head. Ocelli fairly large, less than $\frac{1}{2}$ their width from the eyes.

Postclypeus a little lighter than the head, median line faint.

Pronotum slightly lighter than the head, sides and posterior margins fairly straight, angles fairly sharp.

Posterior margins of the meso- and metanota widely concave.

Wings smoky. Abdominal tergites a little lighter than the head.

Measurements.—

Length with wings	6.95–7.20 mm.
Length without wings	5.50–6.00 mm.
Length of head	.87– .97 mm.
Width of head	.77– .85 mm.
Length of antennae	1.43 mm.
Diameter of eye	.27– .29 mm.
Length of pronotum	.41– .43 mm.

Measurements.—

Width of pronotum.....	.63- .68 mm.
Length of hind tibia.....	.93-1.06 mm.
Length of anterior wing.....	6.20-6.73 mm.
Width of anterior wing.....	1.80-1.83 mm.

Comparison with other species.—This species is very close to *N. kartaboensis*, but differs conspicuously in the length of the wings.

Soldier.—Head yellow, egg-shaped from above with a slight constriction at the base of the antennae, profile of head and nose nearly straight or slightly convex.

Antennae with 11 segments, the 2d equals the 4th, the 3d is slightly longer than the 2d.

Nose brownish, not contrasting as strongly with the head as in *N. kartaboensis*. Nose cone-shaped, rather thick at the base, covered with short hairs which are shorter than the rather long hairs on the head. Several longer bristles also on the head.

Thorax pale. Abdomen the color of the intestinal contents. Tergites covered with rather long hair and with a row of bristles on the posterior margins.

Measurements.—

Total length.....	3.30-3.50 mm.
Length of head.....	1.00-1.07 mm.
Width of head.....	.54- .57 mm.
Length of antennae.....	1.00 mm.
Width of pronotum.....	.33 mm.
Length of hind tibia.....	.56- .60 mm.

Comparison with other species.—Very close to *N. kartaboensis*, but the nose is not quite as dark.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Winged imago.

Morphotype.—Soldier.

The description is based upon several winged imagos, soldiers and a single king and queen collected from two different colonies by the author at Kartabo.

***Nasutitermes (Convexitermes) manni*, sp. nov.**

(Fig. 72)

Imago.—Head dark brown, oval. Fontanelle slit-shaped, longer than the ocelli, forked at the tip. Head clothed with hair and a few long bristles.

Antennae with 14 segments, the 4th a little larger than the 2d, 3d larger than the 4th.

Eyes fairly large, prominent, fairly close to the lower margin of the head. Ocelli fairly large, about $\frac{1}{2}$ their width removed from the eyes.

Postclypeus slightly lighter than head, median line faint.

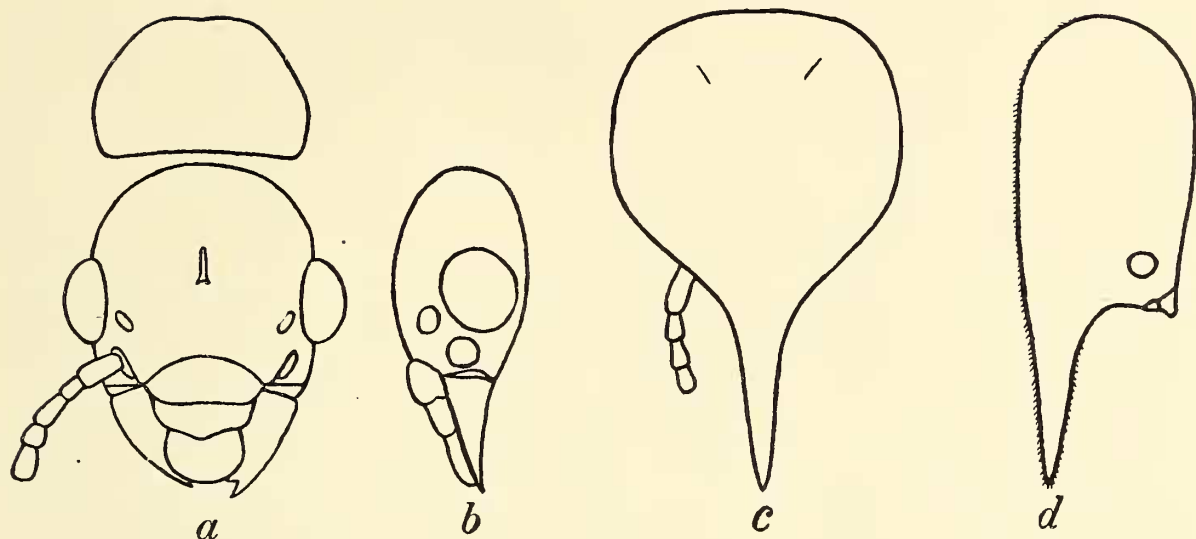


Fig. 72. *Nasutitermes (Convexitermes) manni*, sp. nov. a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, soldier, dorsal view of head; d, soldier, lateral view of head.

Pronotum slightly lighter than head, posterior margins of meso- and metanota widely emarginate.

Wings smoky, a light streak between the media and cubitus, membrane covered with hairs and pigment spots.

Abdominal tergites about the same color as the pronotum.

Measurements.—

Length with wings.....	9.00–9.25 mm.
Length without wings.....	5.00–6.00 mm.
Length of head.....	.93–1.00 mm.
Width of head.....	.83–.87 mm.
Length of antennae.....	1.67–1.73 mm.
Diameter of eye.....	.25–.27 mm.
Length of pronotum.....	.43–.46 mm.
Width of pronotum.....	.67–.74 mm.
Length of hind tibia.....	1.02–1.07 mm.
Length of anterior wing.....	6.83–7.50 mm.
Width of anterior wing.....	1.93–2.10 mm.

Soldier.—Head yellow, nearly round from above without the nose, posterior margin with a slight groove, profile convex. Head covered with very short hairs, 2 longer bristles on the vertex, bristles at the base of the nose either absent or present.

Antennae with 11 segments, the 3d a little longer than the 2d, the 4th about equal to the 2d.

Nose brown, darker than the head, covered with short hair, more slender than in *N. convexifrons*.

Pronotum pale, anterior margin emarginate.

Abdomen the color of the intestinal contents. Tergites covered with short hairs, no marginal bristles present.

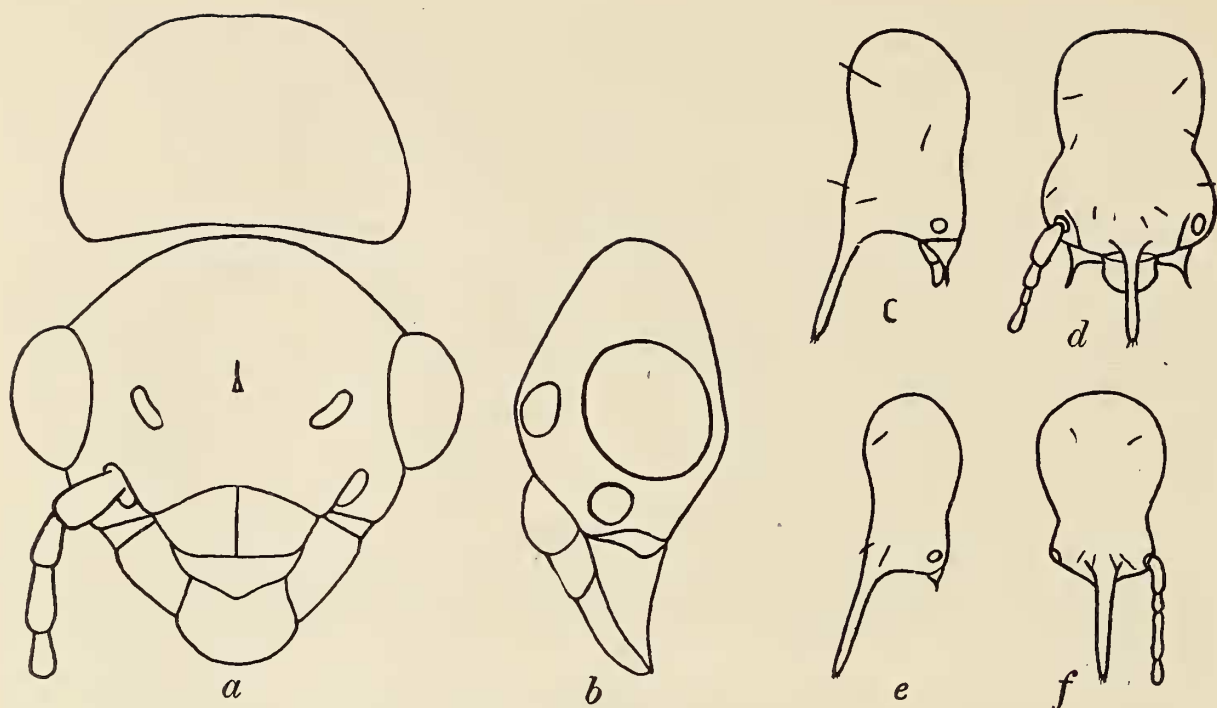


Fig. 73. *Nasutitermes* (*Velocitermes*) *beebei*, sp. nov. *a*, imago, dorsal view of head and pronotum; *b*, imago, lateral view of head; *c*, major soldier, lateral view of head; *d*, major soldier, dorsal view of head; *e*, minor soldier, lateral view of head; *f*, minor soldier, dorsal view of head.

Measurements.—

Total length.....	3.00–3.40 mm.
Length of head.....	1.27–1.53 mm.
Width of head.....	.77–.87 mm.
Length of antennae.....	1.03–1.10 mm.
Width of pronotum.....	.40–.45 mm.
Length of hind tibia.....	.67–.83 mm.

Comparison with other species.—The soldier is very close to *N. convexifrons* (Holmgren), but differs in having a more slender nose.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Soldier.

Morphotype.—Imago.

The description is based upon many soldiers and winged imagos taken from six different colonies by the author at Kartabo. I take pleasure in naming this species in honor of Wm. M. Mann of the U. S. National Museum, who has determined a large number of the termitophilous Coleoptera found at Kartabo.

Subgenus *Velocitermes* Holmgren

This interesting subgenus is known only from four species including the new species described below. All these species are confined to the Neotropical region and only one, *N. antillarum* (Holmgren) from Hispaniola, is to be found off the South American continent. The peculiar dimorphism among the

soldiers is very remarkable and as far as I know, nothing definite is yet known concerning the function of the different types.

A single rare species was found at Kartabo which proved to be new.

Nasutitermes (Velocitermes) beebei, sp. nov.

(Fig. 73)

Imago (male).—Head dark brown, oval, clothed with short hair and longer bristles. Fontanelle white, slit-shaped, not quite as long as the ocelli.

Antennae with 15 segments, 3d much longer than the 2d and slightly shorter than the 1st, 2d and 4th about equal.

Eye rather large, very prominent and close to the lower margin. Ocelli rather large, facing laterally, about their width removed from the eyes.

Postclypeus slightly lighter than the head, median line present.

Pronotum somewhat lighter than the head; proportionately rather long; posterior margin not or very imperceptibly emarginate; covered with hairs and bristles.

Wings smoky, a light streak between the media and cubitus. Membrane covered with short hairs and pigment spots.

Abdominal tergites same color as the pronotum.

Measurements.—

Length with wings	12.80 mm.
Length without wings	6.00 mm.
Length of head	1.37 mm.
Width of head	1.30 mm.
Diameter of eye	.40 mm.
Length of pronotum	.70 mm.
Width of pronotum	1.10 mm.
Length of hind tibia	1.83 mm.
Length of anterior wing	10.35 mm.
Width of anterior wing	3.06 mm.

Major soldier.—Head dark brown, larger and thicker than that of the minor soldier, widest in the region of the antennae, elevation at the base of the nose very conspicuous, posterior margin straighter than in the minor soldier; 4 bristles over the base of the nose, 2 on the vertex, 2 on the sides near the constriction and 2 on the cheeks; middle of head very conspicuously constricted.

Antennae about the same color as the head, with 14 segments, the 2d, 3d, and 4th equal in length but the 3d is not as thick as the 2d or 4th.

Mandibles distinct, relatively large, with sharp points.

Tip of nose lighter than the head; nose relatively shorter than the minor soldier, slender and slightly enlarged at the tip.

Pronotum with minute hairs and a few bristles on the anterior margin.

Abdominal tergites somewhat lighter than the head, with a row of bristles on the posterior margin, hair absent. Sternites with long hairs and bristles.

Measurements.—

Total length.....	4.00 mm.
Length of head.....	1.34–1.50 mm.
Width of head.....	.68–.73 mm.
Length of antennae.....	1.92–2.00 mm.
Width of pronotum.....	.60 mm.
Length of hind tibia.....	1.54–1.60 mm.

Minor soldier.—Head same color as major soldier, constricted in the middle, profile with a faint elevation at the base of the nose; with only a few bristles, 4 at the base of the nose and 2 on the vertex.

Antennae long, sometimes with 14 segments, but more often with 13. When with 13, the 3d is over double the length of the 2d and the tip is enlarged, the 4th is longer than the 2d. When with 14 segments, the 3d is about equal to the 2d and is without bristles.

Nose slender, fairly long, pointed up.

Pronotum with a raised anterior margin which is not emarginate; without bristles but covered with small, fine hairs.

Abdominal tergites with a row of bristles on the posterior margins, but no hairs are present.

Measurements.—

Total length.....	3.50–4.20 mm.
Length of head.....	1.25–1.50 mm.
Width of head.....	.57–.73 mm.
Length of antennae.....	2.40–2.67 mm.
Width of pronotum.....	.40–.47 mm.
Length of hind tibia.....	1.35–1.53 mm.

Comparison with other species.—Closest to *N. heteropterus* (Silvestri) but both castes of soldiers are quite distinct in shape and size.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Major soldier.

Morphotype.—Minor soldier and winged imago.

The description is based upon a single winged imago, several major soldiers and many minor soldiers collected from five different colonies by the author at Kartabo.

I have named the species in honor of Mr. William Beebe, the Director of the Tropical Research Station of the New York Zoological Society at Kartabo, to whom I owe the wonderful opportunity for spending twenty-four months at the station working upon the termites of the region.

Subgenus *Constrictotermes* Holmgren

This subgenus includes three species in the sense in which Holmgren (1912) defined the subgenus. I do not believe that any of the species included in the paper by Banks (1919) in *Constrictotermes* rightfully belong to this group.

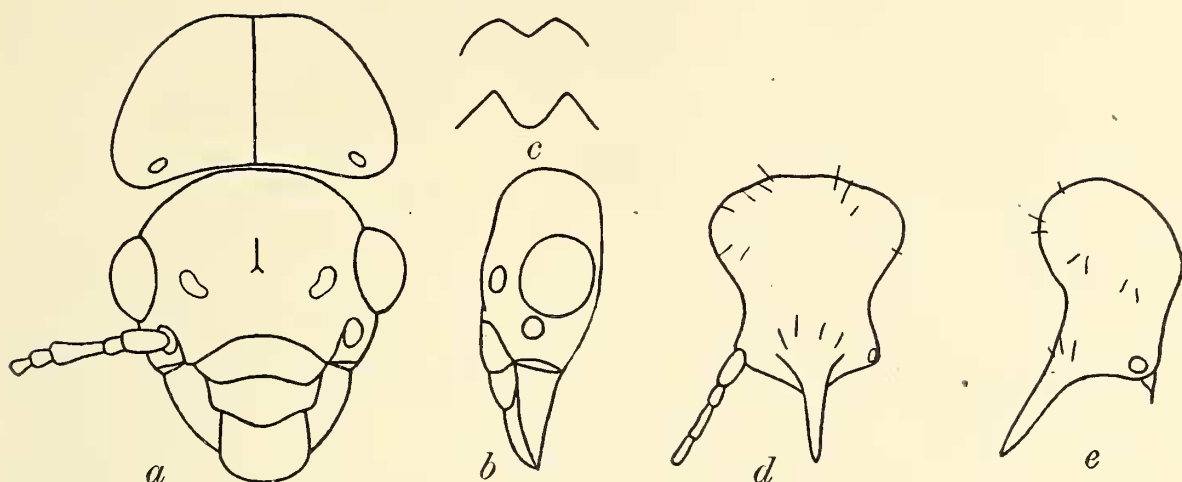


Fig. 74. *Nasutitermes* (*Constrictotermes*) *cavifrons* (Holmgren). *a*, imago, dorsal view of head and pronotum; *b*, imago, lateral view of head; *c*, imago, hind margins of thoracic nota; *d*, soldier, dorsal view of head; *e*, soldier, lateral view of head.

Without examining any of these species, I believe that most of them will fit into the subgenera *Subulitermes* or *Tenuirostritermes* as defined by Holmgren (1912).

The three species included in the subgenus *Constrictotermes* are, so far, known only from South America. One of these, which was described from Surinam, was found rather commonly in British Guiana.

Nasutitermes (*Constrictotermes*) *cavifrons* (Holmgren).

Eutermes (*Constrictotermes*) *cavifrons* Holmgren (1910), p. 318 (soldier, worker), text-fig. 78 (soldier).

Eutermes (*Constrictotermes*) *cavifrons* Holmgren (1912), pp. 65, 67, text-fig. 43 (mandibles of soldier).

(Fig. 74)

Imago.—Head brownish black, sparsely covered with fairly long hair; widely oval. Fontanelle slit-shaped, forked at the tip, as long as the ocelli.

Antennae lighter than the head, with 15 segments, the 2d equal to the 4th, the 3d more than double the length of the 2d.

Eyes large and prominent, close to the lower margin of the head. Ocelli large and prominent, about their own length removed from the eyes.

Labrum lighter than the head. Postclypeus brownish black, without distinct median line.

Pronotum lighter than the head, sparsely covered with fairly long hair; large, as wide as the head or nearly so, sides and angles rounded, posterior margin very faintly emarginate.

Posterior margins of meso- and metanota deeply emarginate.

Wings dark smoky, venation distinct.

Abdomen brownish black. Soft parts of the abdomen of the queen yellowish in life.

Measurements.—

Length with wings 17.00–19.00 mm.

Length without wings 8.00–10.00 mm.

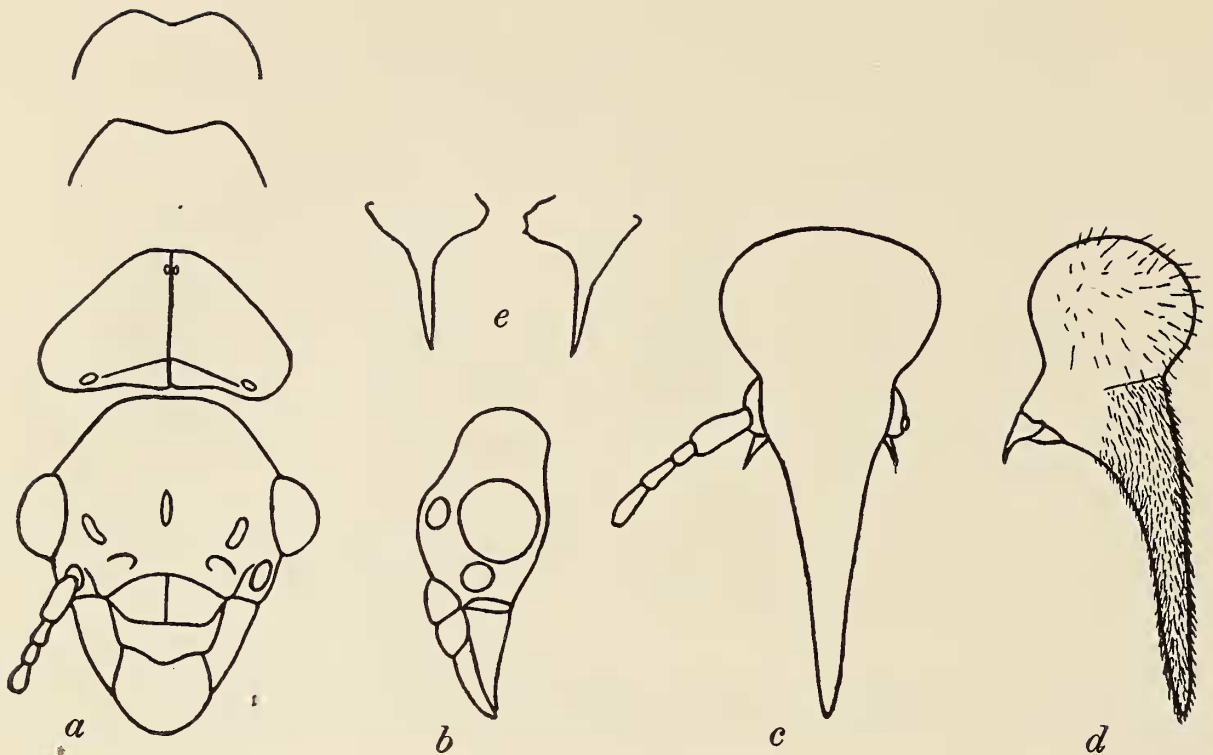


Fig. 75. *Nasutitermes* (*Angularitermes*) *nasutissimus*, sp. nov. *a*, imago, dorsal view of head, pronotum and margins of thoracal nota; *b*, imago, lateral view of head; *c*, soldier, dorsal view of head; *d*, soldier, lateral view of head; *e*, soldier, mandibles.

Measurements.—

Length of head.....	1.83– 1.90 mm.
Width of head.....	1.69– 1.83 mm.
Length of antennae.....	2.53– 2.57 mm.
Diameter of eye.....	.50– .53 mm.
Length of pronotum.....	1.00– 1.03 mm.
Width of pronotum.....	1.73– 1.83 mm.
Length of hind tibia.....	2.16– 2.43 mm.
Length of anterior wing.....	13.50–15.00 mm.
Width of anterior wing.....	3.76– 4.11 mm.
Length of queen.....	18.00 mm.
Width of abdomen of queen.....	4.20 mm.

Soldier.—Head brownish black, region around the antennae lighter; with a strong constriction in the middle; 4 bristles at the base of the nose and a number on the vertex.

Antennae with dark rings about the same color as the head, very long, with 15 segments, the 3d nearly double the length of the 2d, the 4th a little shorter than the 3d, the 5th equal to the 3d.

Nose pointing up, tip lighter than the head.

Thorax yellow. Pronotum covered with a few bristles, anterior margin with fine hairs.

Legs relatively very long. Coxae and tarsi yellow, femora and part of tibiae next to the femora darker.

Abdominal tergites brownish black, with numerous bristles and few hairs. Sternites yellow, covered with hair and also with marginal rows of bristles.

Measurements.—

Total length.....	5.00–5.50 mm.
Length of head.....	1.56–1.70 mm.
Width of head.....	1.00–1.12 mm.
Length of antennae.....	3.40–3.58 mm.
Width of pronotum.....	.67–.70 mm.
Length of hind tibia.....	2.00–2.27 mm.

Type locality.—Surinam.

New localities.—British Guiana: Kartabo, Bartica, Dunoon.

Range.—Surinam, British Guiana.

The description is based upon many winged imagos, kings, queens, and soldiers collected from eight different nests by the author at Kartabo. Soldiers collected by Mr. G. E. Bodkin from a single colony at Bartica, and soldiers collected by F. M. Gaige from a single colony at Dunoon agree with the Kartabo specimens.

Subgenus **Angularitermes** subgen. nov.

A single species of *Nasutitermes* found at Kartabo obviously did not belong to any subgenus yet described and I have therefore referred it to a new subgenus, *Angularitermes*, named for the distinctly angular character of the head of the imago. The soldier differs from other subgenera in the tremendously large nose in proportion to the rest of the head and in the mandibles, the description of which follows. Every other species with which I am familiar which possesses long legs such as the members of the subgenera *Constrictotermes* and *Velocitermes*, etc., are able to run swiftly, but this species is slow in its habits.

Nasutitermes (Angularitermes) nasutissimus, sp. nov.

(Fig. 75)

Imago.—Head dark brown, sparsely clothed with long hairs; oval, posterior margin behind the eyes angular from above, profile with a conspicuous elevation above the eyes. Fontanelle oval, about the same length as the ocelli.

Antennae yellow brown, the 3d segment about the same length as the 2d, the 4th segment a little longer than the 3d.

Eyes large, close to the lower margin of the head. Ocelli relatively large, a little less than their own width removed from the eyes.

Labrum yellowish. Postclypeus somewhat lighter than the head, not quite as long as half its width, strongly arched, with median line.

Pronotum nearly as dark as the head, a light spot near each anterior angle, 2 light spots together in the middle near the posterior margin; subtriangular, angles rounded, sides straight, strongly converging toward the rear. Pronotum narrower than the head.

Meso- and metanota lighter than the pronotum, posterior margins widely emarginate.

Abdominal tergites about the same color as the pronotum.

Measurements.—

Length of head	1.50–1.60 mm.
Width of head	1.36–1.43 mm.
Diameter of eye	.43 mm.
Length of pronotum	.70–.73 mm.
Width of pronotum	1.20–1.26 mm.
Length of hind tibia	2.17 mm.
Length of queen	12.00 mm.
Width of abdomen of queen	3.00 mm.

Soldier.—Head yellow brown, constricted behind the antennae; thickly covered with bristles.

Antennae same color as the head, with 14 segments, the 3d one and one-half times the length of the 2d, the 4th equals the 3d or is very slightly longer.

Mandibles with long points, the left with a very small microscopical tooth near the base, the right without a tooth near the base.

Nose darker than the head, very thickly covered with short hairs from the constriction in the head to the tip; very large, long, and thick at the base. This is the most extreme case of the development of the nose among all the nasuate soldiers known to me.

Thorax brownish yellow. Pronotum with bristles on the margins; anterior margin also with small hairs, slightly emarginate.

Legs proportionately very long. Abdominal tergites brownish yellow, covered thickly with long bristles.

Measurements.—

Total length	6.00–6.50 mm.
Length of head	2.69–2.73 mm.
Width of head	1.00–1.10 mm.
Length of antennae	3.20–3.30 mm.
Width of pronotum	.63–.73 mm.
Length of hind tibia	2.13–2.33 mm.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Soldier.

Morphotype.—King.

The description is based upon a single king and queen and many soldiers from two colonies at Kartabo collected by the author.

Genus *Anoplotermes* Fr. Muller

This genus has been divided into two subgenera, both of which are represented in British Guiana.

Subgenus *Anoplotermes*, s. str. Holmgren

For a long time it was supposed that this subgenus was confined to the

Nectropical region. Silvestri (1914), however, has referred a number of African species to *Anoplotermes*. Including the species described in this report, there are twenty-seven known species of the group, eleven species reported from Africa and seventeen species reported from the Neotropical region. Many of the species, however, have not been described accurately enough to permit determination. Where there are no soldiers to give us comparatively easy characters for determination, the imago should be described with the utmost care.

I found five distinct species which I refer to the subgenus *Anoplotermes* in British Guiana. One other species has been reported by Hagen (1858) from British Guiana, but this species, *Anoplotermes cingulatus* (Burmeister), was not described well enough by Hagen to permit determination with accuracy. The species described by Silvestri (1903) under this name does not agree with any of my specimens and I think it probable, due to the difficulty of recognizing imagos, that Hagen may have included two species under his one description. It may, therefore, be possible that I have the species referred to, but I believe that it will avoid confusion to give it another name. All the species at Kartabo seem to be new.

Silvestri (1903) describes a species under the name *Anoplotermes morio* (Latreille). I have already pointed out in my discussion of the synonymy of *Nasutitermes* (*Nasutitermes*) *costalis* (Holmgren) that Fabricius (1793) had already described a species under the name *Termes morio* which I doubtfully have placed in synonymy with *Coptotermes testaceus*. I have also placed *Termes morio* Latreille in synonymy with *Nasutitermes costalis* following Hagen (1858). Latreille's species, however, is rather doubtful. Whatever the synonymy is, however, Silvestri's species needs a new name and I suggest the name *Anoplotermes* (*Anoplotermes*) *meridianus* for it, with the following synonymy:

***Anoplotermes* (*Anoplotermes*) *meridianus*, nom. nov.**

Anoplotermes morio Silvestri (1901), p. 8 (imago).

Anoplotermes morio Silvestri (1903), p. 99, 100 (imago, worker), text-fig. 32 (wing), p. 142 (biology), pl. 5, figs. 225, 226 (imago), fig. 227 (worker).

Anoplotermes (*Anoplotermes*) *morio* Holmgren (1912), pp. 73, 74, text-fig. 46 (mandibles of imago).

***Anoplotermes* (*Anoplotermes*) *silvestrii*, sp. nov.**

(Fig. 76)

Imago.—Head brownish black, widely oval, posterior margin round; covered with hairs of varying length. Fontanelle very large, round, a little lighter than the head. 2 conspicuous muscle insertions in front of the ocelli.

Antennae with 15 segments, the 3d very slightly shorter or as long as the 4th, the 4th slightly shorter than the 2d.

Eyes rather small, not very prominent, about $\frac{1}{4}$ their diameter from the lower margin of the head. Ocelli prominent, about their own length from the eyes.

Labrum pale. Postclypeus a little lighter than the head, median line faint, nearly as long as $\frac{1}{2}$ their width.

Pronotum a little lighter than the head, sides rounded, posterior margin weakly emarginate.

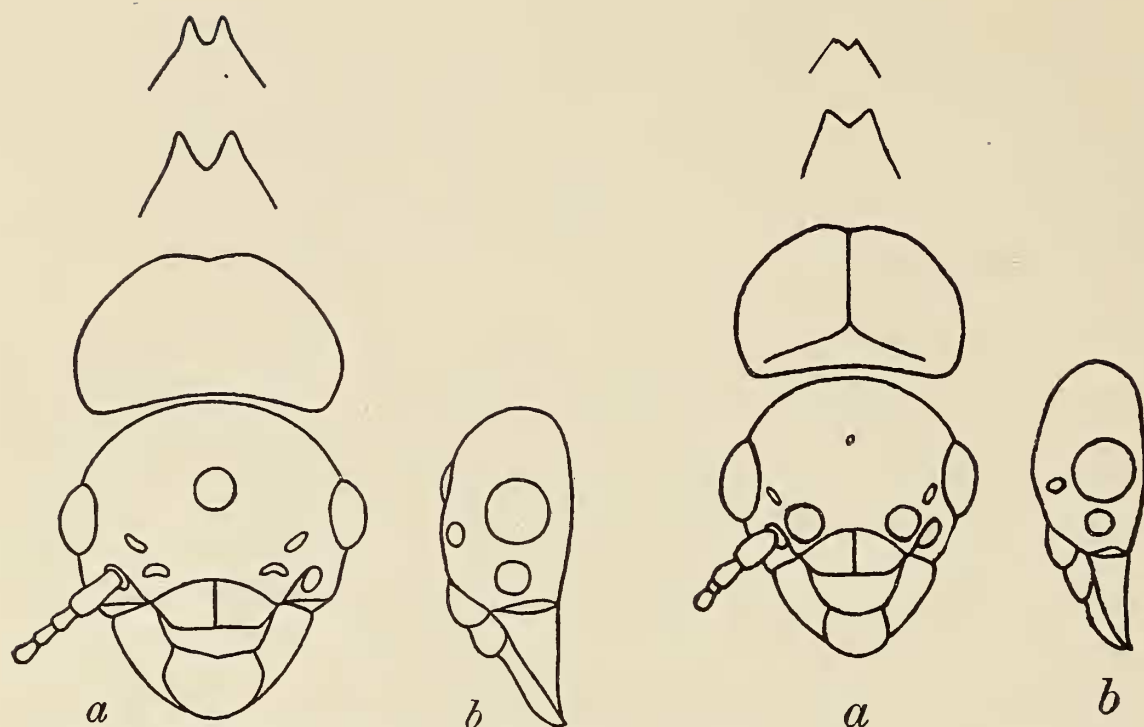


Fig. 76. *Anoplotermes* (*Anoplotermes*) *silvestrii*, sp. nov. *a*, imago, dorsal view of head, pronotum and margins of thoracal nota; *b*, imago, lateral view of head.

Fig. 77. *Anoplotermes* (*Anoplotermes*) *banksi*, sp. nov. *a*, imago, dorsal view of head; pronotum and margins of thoracal nota; *b*, imago, lateral view of head.

Posterior margins of meso- and metanota deeply emarginate, angles sharp, sides strongly converging.

Wings smoky, venation distinct throughout; with fine short hairs on the margins and veins, very few in the membrane of the wing.

Abdominal tergites a little lighter than the head.

Measurements.—

Length with wings.....	14.50–18.00 mm.
Length without wings.....	8.00–12.00 mm.
Length of head.....	1.55– 2.00 mm.
Width of head.....	1.44– 1.60 mm.
Length of antennae.....	2.36– 2.60 mm.
Diameter of eye.....	.36 mm.
Length of pronotum.....	.77– .87 mm.
Width of pronotum.....	1.33– 1.40 mm.
Length of hind tibia.....	2.00 mm.
Length of anterior wing.....	12.50–15.00 mm.
Width of anterior wing.....	2.90– 3.50 mm.
Length of queen.....	46.00 mm.
Width of abdomen of queen.....	7.00 mm.

Comparison with other species.—Close to *A. pacificus*, but it seems to have a larger fontanelle than indicated by Silvestri's (1903) figure. *A. turricola* differs in the size of the antennae segments and in the fontanelle.

Remarks.—Differs from Holmgren's characters of the subgenus in that

the 3d segment of the antennae is nearly as long as the 4th. The head of the worker, however, is light in color.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Winged imago.

The description is based upon many winged imagos, kings and queens collected from eight different colonies by the author at Kartabo. I take pleasure in naming this species after the distinguished Italian specialist, Prof. Filippo Silvestri, who has done so much to further our knowledge of termites from all parts of the world.

Anoplotermes (Anoplotermes) banksi, sp. nov.

(Fig. 77)

Imago.—Head dark brown, oval, thickly covered with rather long hairs. Fontanelle small and inconspicuous. 2 large muscle insertions in front of the ocelli.

Antennae with 15 segments, the 3d very minute, the 4th smaller than the 2d.

Eyes of medium size and not particularly close to the lower margin of the head. Ocelli rather small, their own length or slightly less removed from the eyes.

Postclypeus a little lighter than the head, median line present.

Pronotum a little lighter than the head, a Y-shaped mark in the middle, the stem of which is light and the branches of which are dark; sides rounded, posterior margin very slightly emarginate.

Posterior margins of the meso- and metanota narrow and deeply emarginate.

Wings light smoky in alcohol, veins indistinct near the apex. In some specimens the veins are more distinct and the area between the radius and media is reticulated. In life the wings have a bluish gray color.

Abdominal tergites about the same color as the pronotum.

Measurements.—

	Male	Female
Length with wings.....	8.00–8.50 mm.	9.50–10.00 mm.
Length without wings . . .	4.50–5.00 mm.	5.50– 6.00 mm.
Length of head.....	.90– .93 mm.	.97– 1.06 mm.
Width of head.....	.77– .83 mm.	.82– .90 mm.
Length of antennae.....	1.33–1.36 mm.	1.40– 1.50 mm.
Diameter of eye.....	.20– .21 mm.	.23 mm.
Length of pronotum.....	.43– .46 mm.	.46– .48 mm.
Width of pronotum.....	.60– .70 mm.	.71– .73 mm.
Length of hind tibia.....	.83– .97 mm.	.91– .94 mm.
Length of anterior wing..	7.00–7.26 mm.	7.95– 8.00 mm.
Width of anterior wing...	1.67–1.73 mm.	1.90– 1.95 mm.
Length of queen.....		25.00 mm.

Comparison with other species.—Close to *A. ater* Hagen, but the measurements are smaller.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Winged imago.

The description is based upon many winged imagos, kings and queens taken by the author from eight different colonies at Kartabo. The species is named in honor of Mr. Nathan Banks, the distinguished American entomologist, who has done so much valuable work upon the termites of the Nearctic and Neotropical regions.

Anoplotermes (Anoplotermes) brevipilus, sp. nov.

(Fig. 78)

Imago.—Head dark brown, oval, hair somewhat shorter than in *A. banksi*. Fontanelle small and inconspicuous.

Antennae with 15 segments, the 3d minute, the 4th shorter than the 2d.

Eyes of medium size, not very close to the lower margin of the head.

Ocelli fairly large, a little less than their width removed from the eyes.

Postclypeus a little lighter than the head, no median line visible.

Pronotum a little lighter than the head, crescent-shaped, light marks in the middle faint; posterior margin and sides form an even curve, anterior margin concave.

Posterior margins of the meso- and metanota narrowly and deeply emarginate.

Wings light smoky in color in alcohol. Abdominal tergites the same color as the pronotum.

Measurements.—

	Male	Female
Length with wings.....	7.00–7.40 mm.	8.25–8.50 mm.
Length without wings . . .	4.20–4.75 mm.	5.00–5.80 mm.
Length of head.....	.76– .80 mm.	.83– .85 mm.
Width of head.....	.68– .73 mm.	.70– .77 mm.
Length of antennae	1.07–1.10 mm.	1.10–1.25 mm.
Diameter of eye.....	.20 mm.	.22– .23 mm.
Length of pronotum.....	.33– .36 mm.	.36– .40 mm.
Width of pronotum.....	.53– .56 mm.	.57– .60 mm.
Length of hind tibia	.63– .67 mm.	.70– .73 mm.
Length of anterior wing . .	5.70–5.95 mm.	6.82–7.00 mm.
Width of anterior wing . .	1.43–1.50 mm.	1.63–1.73 mm.

Comparison with other species.—Close to *A. banksi*, but smaller, and hair on head, pronotum and sternites somewhat shorter. The figure of the pronotum of *A. schwarzi* Banks (1919) is inaccurate. *A. schwarzi* is 14.00 mm. long and the width of the head is 1.30 mm. The specimens described as *A. fumosus* (Hagen) by Banks have larger mandibles and the antennae segments differ in the figure (Banks & Snyder, 1920). Hagen's (1860a) original description of *A. fumosus* gives the length with wings as 14.00 mm.

Type locality.—Kartabo, British Guiana.

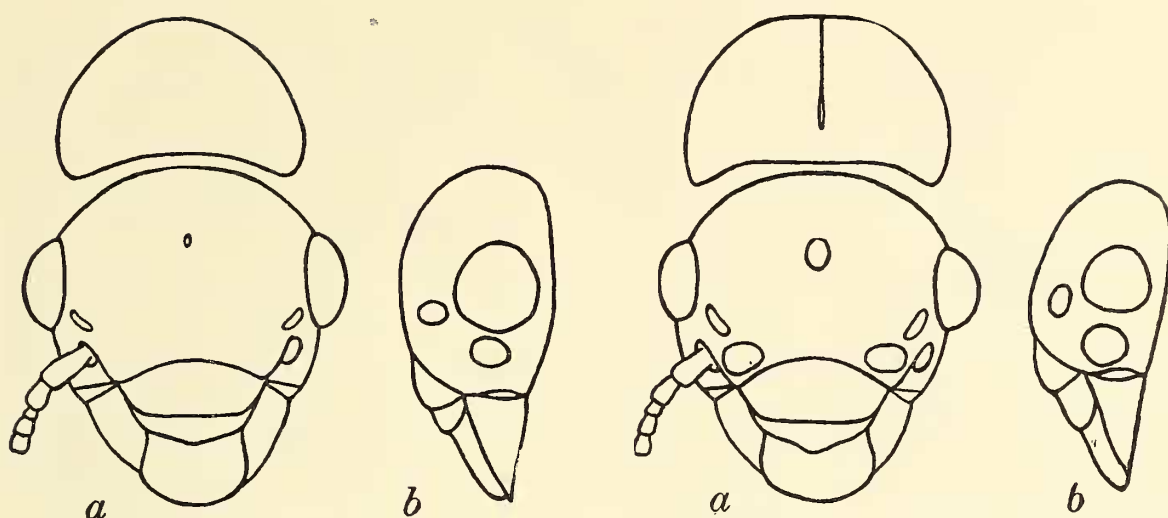


Fig. 78. *Anoplotermes* (*Anoplotermes*) *brevipilus*, sp. nov. *a*, imago, dorsal view of head and pronotum; *b*, imago, lateral view of head.

Fig. 79. *Anoplotermes* (*Anoplotermes*) *subterraneus*, sp. nov. *a*, imago, dorsal view of head and pronotum; *b*, imago, lateral view of head.

Range.—Known only from the type locality.

Holotype.—Winged imago.

The description is based upon many winged imagos, kings and queens taken from eleven different colonies by the author at Kartabo.

***Anoplotermes* (*Anoplotermes*) *subterraneus*, sp. nov.**

(Fig. 79)

Imago.—Head dark brown, widely oval, covered with medium long hair; 2 large muscle insertions in front of the ocelli. Fontanelle about the same size as the ocelli, white and conspicuous.

Antennae with 15 segments, the 3d small, the 4th shorter than the 2d.

Eyes of medium size, not very close to the lower margin. Ocelli rather large, less than their width from the eyes.

Postclypeus lighter than the head, no median line visible.

Pronotum lighter than the head, posterior margin and sides forming nearly an even curve, anterior angles sharp; a light line in the middle of the pronotum.

Posterior margins of the meso- and metanota narrowly and deeply emarginate.

Wings smoky, veins fairly distinct throughout.

Abdominal tergites same color as the pronotum, a light spot on the anterior border on each side.

Measurements.—

Length with wings	9.50–10.50 mm.
Length without wings	4.50– 6.20 mm.
Length of head	.97 mm.
Width of head	.83– .87 mm.
Length of antennae	1.43– 1.50 mm.
Diameter of eye	.23 mm.
Length of pronotum	.41– .46 mm.

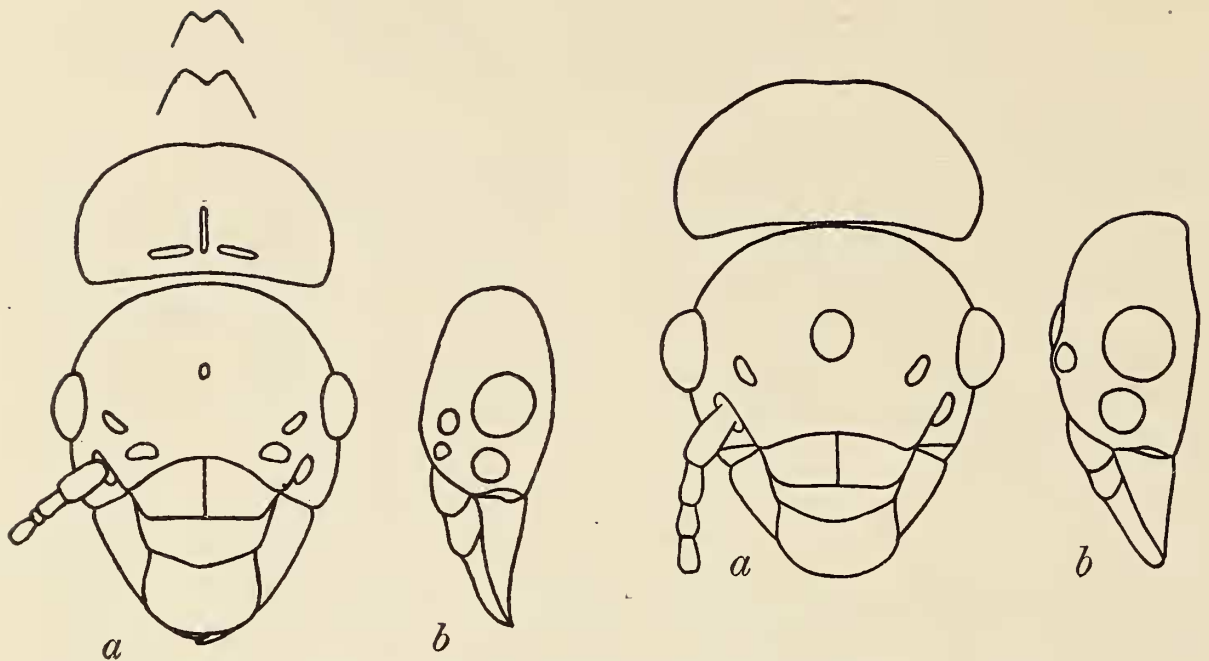


Fig. 80. *Anoplotermes* (*Anoplotermes*) *nigripunctatus*, sp. nov. *a*, imago, dorsal view of head, pronotum and margins of thoracic notae; *b*, imago, lateral view of head.

Fig. 81. *Anoplotermes* (*Speculitermes*) *arboreus*, sp. nov. *a*, imago, dorsal view of head and pronotum; *b*, imago lateral view of head.

Measurements

Width of pronotum.....	.67- .73 mm.
Length of hind tibia.....	.76- .80 mm.
Length of anterior wing.....	7.17- 8.40 mm.
Width of anterior wing.....	2.00- 2.18 mm.

Comparison with other species.—*A. ater* a little larger and without the conspicuous fontanelle. *A. banksi*, *A. brevipilus*, *A. schwarzi*, and *A. fumosus* all without the conspicuous fontanelle.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Winged imago.

Described from many winged imagos taken from a single colony by the author at Kartabo.

Anoplotermes (*Anoplotermes*) *nigripunctatus*, sp. nov.

(Fig. 80)

Imago (queen).—Head dark brown, oval. Fontanelle darker than the head, easily visible but small. Two muscle insertions in front of the ocelli.

Antennae light colored, the 3d segment small, the 4th shorter than the 2d.

Eyes rather small, not very close to the lower margin of the head. Ocelli of medium size, about their own length removed from the eyes.

Postclypeus a little lighter than the head, median line very faint.

Pronotum nearly as dark as the head, a T-shaped series of light marks in the center; sides and posterior margin nearly make a perfect curve.

Posterior margins of meso- and metanota narrowly and deeply emarginate.

Abdominal tergites about the same color as the pronotum, 2 light spots on the anterior margins.

Measurements.—

Length of head	1.25–1.33 mm.
Width of head	1.06–1.16 mm.
Diameter of eye	.28 mm.
Length of pronotum	.57–.58 mm.
Width of pronotum	.90–1.00 mm.
Length of hind tibia	1.30 mm.
Length of queen	40.00 mm.
Width of abdomen of queen	6.00 mm.

Comparison with other species.—Close to *A. meridianus*, but Silvestri's figure shows the posterior margin of the pronotum somewhat emarginate. Hagen's (1858) description of *A. tenebrosus* states that the fontanelle is yellowish.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Queen.

The description is based upon a single king and three queens collected from three different colonies by the author at Kartabo.

Subgenus *Speculitermes* Wasmann

Including the new species described in this report, 3 species have been referred to this subgenus, the genotype from India and Ceylon, the others from South America.

Anoplotermes (*Speculitermes*) arboreus, sp. nov.

(Fig. 81)

Imago.—Head black brown, oval, with rather short hair and longer bristles. Fontanelle same color as the head, large and round, similar to that of *A. silvestrii*.

Antennae with the 2d segment a little longer than the 3d, the 3d equal to the 4th.

Eyes of medium size, not close to the lower margin.

Ocelli rather large, prominent, about their own width removed from the eyes.

Postclypeus black brown, median line faint or absent.

Pronotum black brown, sides rounded, posterior margin somewhat emarginate.

Sides of meso- and metanota with a white border, posterior margins narrow and deeply emarginate.

Coxae and femora dark brown, most of tibiae of the prothoracic legs dark, rest yellow; most of tibiae of the meso- and metathoracic legs yellow and tarsi yellow.

Abdominal tergites black brown.

Measurements.—

Length of head 1.83 mm.

Measurements.—

Width of head	1.67 mm.
Diameter of eye	.43 mm.
Length of pronotum	.90 mm.
Width of pronotum	1.61 mm.
Length of hind tibia	2.30 mm.
Length of queen	19.00 mm.
Width of abdomen of queen	4.80 mm.

Comparison with other species.—Silvestri (1903) described *A. reconditus* with a small oval fontanelle, while Holmgren (1906) described the fontanelle as slit-shaped. I think it likely that Holmgren's species from Bolivia and Peru is distinct from Silvestri's (1903) species from Argentina, Paraguay, and the Matto Grosso. However, the species from Kartabo seems to be distinct from them both.

Remarks.—As the name signifies, this species was the only *Anoplotermes* found nesting more than a few feet from the ground. The head of the worker is dark, thus distinguishing this species from all the others found in British Guiana.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Queen.

The description is based upon a single queen taken from a colony by the author at Kartabo. The species is evidently rather rare at Kartabo, because only three colonies were found. The nest was very different from all other nests in the vicinity and, being conspicuous, would have been seen if there had been many.

Genus *Cylindrotermes* Holmgren

This genus is known only by a single species from South America. Formerly it had only been reported from Bolivia. The specimens from British Guiana, however, seem to coincide with the description of the Bolivian species, so the range is doubtless rather extensive

Cylindrotermes nordenskiöldi Holmgren.

Cylindrotermes nordenskiöldi Holmgren (1906), p. 543 (soldier, worker), text-fig. G (soldier), text-fig. H (worker).

Cylindrotermes nordenskiöldi Holmgren (1912), p. 86, text-fig. 55 (soldier), pl. 4, fig. 21 (soldier).

(Fig. 82)

Imago.—Head medium dark brown, stippled with white, oval, arched between the eyes; covered with thick short hair and numerous bristles. Fontanelle small, round, a little lighter than the head. Muscle insertions not very distinct.

Eyes of medium size, not very close to the lower margin. Ocelli of medium size, about their width removed from the eyes.

Labrum yellowish. Postclypeus somewhat lighter than the forehead,

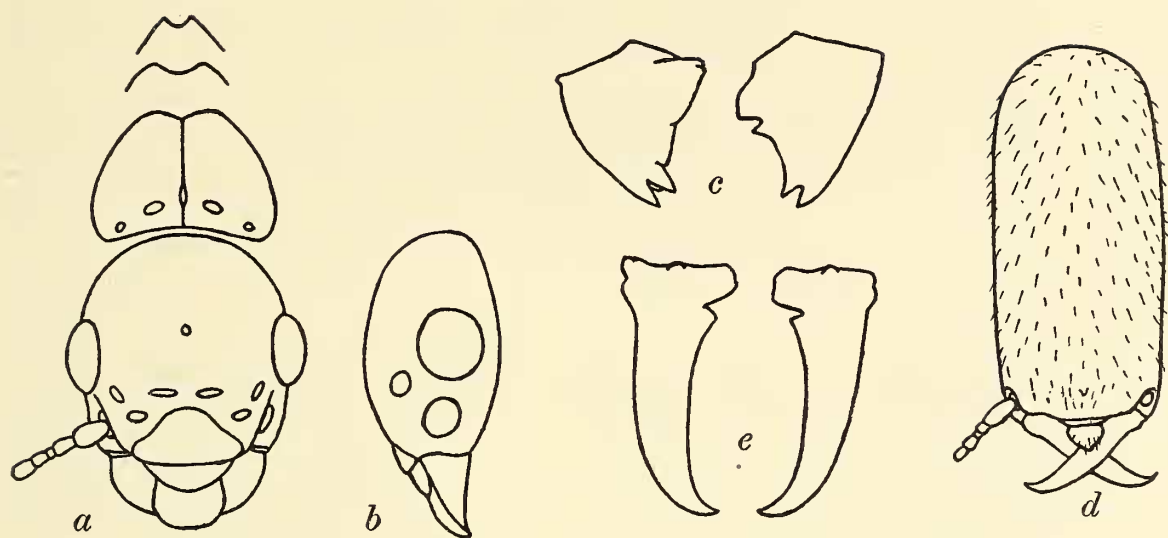


Fig. 82. *Cylindrotermes nordenskioldi* Holmgren. *a*, imago, dorsal view of head, pronotum and margins of thoracic nota; *b*, imago, lateral view of head; *c*, imago mandibles; *d*, soldier, dorsal view of head; *e* soldier, mandibles.

median line not visible. Suture between the forehead and the postclypeus very faint.

Mandibles as in the figure.

Pronotum slightly lighter than the head, with a Y-shaped series of light marks in the center; long and narrow, sides rounded and somewhat depressed, posterior margin deeply emarginate.

Posterior margins of the meso- and metanota emarginate.

All tibiae with 3 apical spines.

Wings smoky, veins distinct, media close to the cubitus with 2-4 branches, cubitus with 9-12 branches.

Abdominal tergites a little lighter than the head.

Measurements.—

Length with wings.....	7.50- 8.00 mm.
Length without wings.....	5.00- 5.30 mm.
Length of head.....	.96- 1.00 mm.
Width of head.....	.86- .87 mm.
Length of antennae.....	1.27- 1.30 mm.
Diameter of eye.....	.27 mm.
Length of pronotum.....	.43- .45 mm.
Width of pronotum.....	.60- .63 mm.
Length of hind tibia.....	.73 mm.
Length of anterior wing.....	6.54 mm.
Width of anterior wing.....	1.30 mm.
Length of queen.....	10.00 mm.
Width of abdomen of queen.....	1.50 mm.

Soldier.—Head yellow, front a little darker, covered with short bristles; very long, sides parallel, posterior margin rounded.

Antennae with 11 segments, the 3d sometimes showing a tendency to divide.

Mandibles red brown, short and curved, ends sharp, a single tooth near the base, left and right very similar.

Frontal gland opening present, very small, situated between the bases of the antennae.

Pronotum yellow, covered with short bristles; anterior lobe distinct, weakly emarginate in the middle.

Legs pale yellow, front tibiae with 3 apical spines, rest of tibiae with 2 apical spines.

Abdomen pale yellow. Tergites covered with short hairs and numerous longer bristles.

Measurements.—

Total length	3.46–4.40 mm.
Length of head with mandibles	2.01–2.33 mm.
Width of head	.77– .87 mm.
Length of antennae	.90–1.03 mm.
Length of pronotum	.32– .40 mm.
Width of pronotum	.57– .61 mm.
Length of hind tibia	.57– .63 mm.
Length of left mandible	.65– .75 mm.

Type locality.—Tuiche (Prov. Caupolican), Bolivia.

New locality.—Kartabo, British Guiana.

Range.—Bolivia, British Guiana.

The description is based upon several winged imagos, a single queen, and numerous soldiers collected by the author from four different colonies at Kartabo.

Genus *Amitermes* Silvestri

Silvestri (1903, p. 217) changed the spelling which he originally used (1901) to *Hamitermes*. Silvestri, Holmgren, and Mjöberg have continued to use the later spelling because hook in Latin is spelled hamus. Banks (Banks & Snyder, 1920) went back to the original spelling and I have followed the international code rule in this respect.

This genus now contains six subgenera, *Euhamitermes*, known from two species from the Oriental Region, *Drepanotermes*, known from five species from Australia, *Monodontermes*, known from three species from Australia, *Synhamitermes*, known from three species, two of which are found in Ceylon and India and one known from the southern part of South America, *Globitermes*, known from three species all confined to the Oriental region, and *Amitermes*, s. str., which is discussed below. Altogether there are seventy-three species described from the genus from nearly all the warm parts of the world.

Subgenus *Amitermes*, s. str. Holmgren

This subgenus is by far the largest of all the subgenera of the genus *Amitermes*. I have fifty-seven species listed in the group distributed as follows: Africa twenty-six, Australia fifteen, Nearctic region six, Neotropical region five, Oriental region two, Palearctic region three. The subgenus has been able

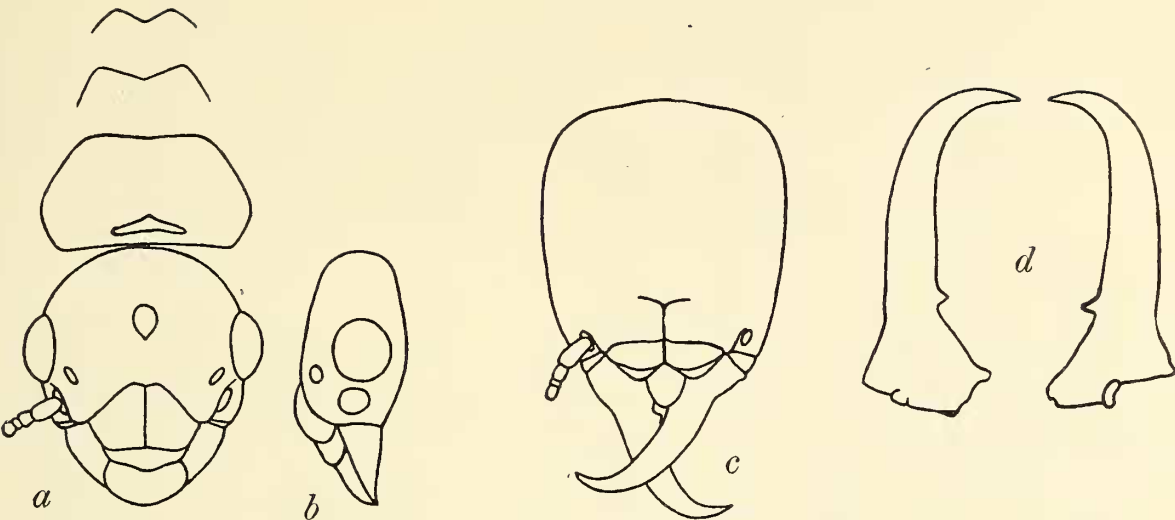


Fig. 83. *Amitermes (Amitermes) excellens* Silvestri. a, imago, dorsal view of head, pronotum and margins of thoracic nota; b, imago, lateral view of head; c soldier, dorsal view of head; d, soldier, mandibles.

to work its way very successfully into the temperate regions, the southern United States and northern Africa being well represented in number of species.

Only one species of this group was found in British Guiana. This species was recently described by Silvestri (1923).

Amitermes (Amitermes) excellens Silvestri.

Hamitermes excellens Silvestri (1923), p. 309 (imago, soldier, worker), pl. XII (imago, soldier).

(Fig. 83)

Imago.—Head brownish black, oval, thickly covered with short hair and a few long bristles. Fontanelle large, conspicuous, yellow, pointed in front.

Antennae light brown, with 15 segments, the 3d shorter than the 2d or 4th.

Eyes of medium size, rather prominent, not very close to the lower margin of the head. Ocelli of medium size, about their own length removed from the eyes.

Labrum yellowish brown. Postclypeus brown, very long, conspicuously arched, with median line.

Pronotum brownish black, a light curved mark near the anterior border; rather wide, wider than the head without the eyes, sides depressed, posterior margin somewhat emarginate.

Posterior margins of the meso- and metanota widely emarginate.

Wings dark smoky, media and outer portion of the cubitus indistinct, a light streak between the media and cubitus near the base.

Abdominal tergites dark brown.

Measurements.—

Length with wings.....	11.50–13.50 mm.
Length without wings.....	7.50– 8.50 mm.
Length of head.....	1.60– 1.71 mm.
Width of head.....	1.40– 1.43 mm.
Length of antennae.....	1.71– 1.73 mm.

Measurements.—

Diameter of eye	.37 mm.
Length of pronotum	.73- .75 mm.
Width of pronotum	1.25- 1.27 mm.
Length of hind tibia	1.50 mm.
Length of anterior wing	9.86 mm.
Width of anterior wing	2.78 mm.

Soldier.—Head yellow, with a few sparsely scattered long bristles; $1\frac{1}{2}$ times as long as broad, sides rounded.

Antennae yellow, with 14–15 segments.

Labrum rounded at the tip. Mandibles strong, similar to each other, each with a small tooth near the base, ends strongly curved and pointed. Gland opening near the front. Clypeus with a median line.

Pronotum yellow, sparsely covered with bristles; anterior lobe large and raised, anterior margin of lobe rounded.

Abdomen the color of the intestinal contents; tergites covered with bristles and short hair.

Measurements.—

Total length	5.00–7.00 mm.
Length of head	3.06–3.10 mm.
Width of head	1.65–1.70 mm.
Length of antennae	2.14–2.17 mm.
Width of pronotum	.86- .90 mm.
Length of hind tibia	1.18–1.37 mm.
Length of left mandible	1.18–1.27 mm.

Type locality.—British Guiana: Kartabo.

Range.—Known only from British Guiana.

Localities.—British Guiana: Kartabo, Potaro.

The description is based upon many winged imagos and soldiers collected from four different colonies by the author at Kartabo. The imago described by Silvestri came from the same colony as the imagos described in this report.

Genus *Mirotermes* Wasmann

This genus has been divided into several subgenera and genera by various authors recently and I, myself, believe that many of the groups deserve generic rank. However, no one has treated the genus as a whole since Holmgren (1912) and I am convinced that it will cause less confusion to follow his general plan until further careful study has been made of the group as a whole. In the wide sense, the genus may be divided into thirteen groups including the new subgenera described in this report. These groups, which I am calling subgenera for the present, are as follows: *Euchilotermes* includes one species and two varieties from Africa; *Cubitermes* includes thirty-five species only recorded from Africa; *Procubitermes* includes twelve species from Africa; *Basidentitermes* includes eight species from Africa; *Orthotermes* includes a single species from Africa; *Ceratotermes* includes a single species from Africa; *Protocapritermes* includes a single species from Australia; *Tuberculitermes* includes a single species

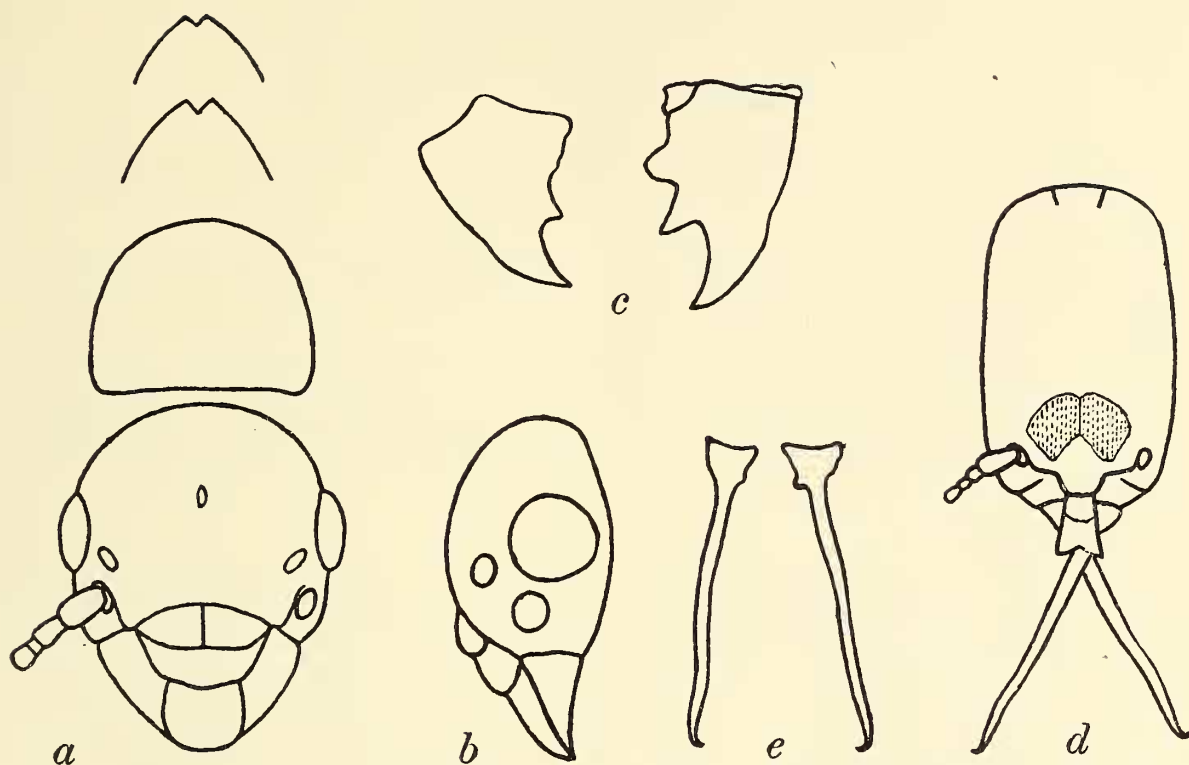


Fig. 84. *Mirotermes* (*Crepititermes*) *verruculosus*, sp. nov. *a*, imago, dorsal view of head, pronotum and margins of thoracic nota; *b*, imago, lateral view of head; *c*, imago, mandibles; *d*, soldier, dorsal view of head; *e*, soldier, mandibles.

from Africa; *Promirotermes* includes four species from Africa; and *Mirotermes*, s. str., *Spinitermes*, *Crepititermes*, and *Cavitermes* which will be discussed below. Altogether I have 106 species in my catalogue for the entire genus, distributed widely. All the subgenera with the exception of *Mirotermes*, s. str., however, are each confined to one region in their distribution.

Subgenus **Crepititermes**, subgen. nov.

This diminutive termite does not fit into any of the existing groups of the genus, so I have given it a new name. The soldier is quite distinct from all the other groups of the genus *Mirotermes* in that it has a flat forehead. With this exception, I believe it comes closest to the subgenus *Mirotermes*, s. str. The mandibles are adapted for snapping and have the same form as in *Mirotermes*, s. str.

Mirotermes (**Crepititermes**) *verruculosus*, sp. nov.

(Fig. 84)

Imago.—Head brown, widely oval, covered with short hair and bristles; thick in proportion to the length. Fontanelle a little darker than the rest of the head, inconspicuous.

Left mandible with 2 large teeth, one sharply pointed, the other rounded; right mandible with only 1 pointed tooth.

The 3d segment of the antennae very short, much shorter than the 4th, the 4th shorter than the 2d.

Eyes of medium size, not very prominent, fairly close to the lower margin

Ocelli of medium size, not prominent, about their own diameter removed from the eyes.

Postclypeus brown, median line faint.

Pronotum proportionately very long, about $\frac{3}{4}$ as long as wide; anterior margin straight; posterior margin rounded, forming a continuous curve with the sides.

Posterior margins of the meso- and metanota with small deep notches, sides strongly converging, angles sharp. Wings smoky; a light line between the media and cubitus in the basal half.

Front legs with 3 apical spines on the tibiae, one of which is rather difficult to see; 2 apical spines on the tibiae of all the other legs.

Abdominal tergites brown. Abdomen of queen covered with small warty spots.

Measurements.—

Length with wings	6.75– 7.00 mm.
Length without wings	4.30– 4.40 mm.
Length of head	.72– .83 mm.
Width of head	.61– .67 mm.
Diameter of eye	.22 mm
Length of pronotum	.43– .44 mm.
Width of pronotum	.51– .57 mm.
Length of hind tibia	.70– .73 mm.
Length of anterior wing	5.25– 5.51 mm.
Width of anterior wing	1.32– 1.35 mm.
Length of queen	21.00 mm.
Width of abdomen of queen	4.00 mm.

Soldier.—Head pale yellow, covered with short hairs; long, subrectangular, sides nearly parallel, converging sharply in front of the base of the antennae.

Antennae paler than the head, with 13 segments, reaching a little beyond the mandibles.

Labrum with 2 points, about $\frac{1}{4}$ the length of the mandibles.

Mandibles brown, slender, extreme end sharply curved, base broad with a tooth on the inner edge which is more conspicuous on the left mandible than on the right mandible.

Pronotum paler than the head, saddle-shaped, with a few bristles on the margins.

Abdomen the color of the contents of the intestines. Tergites and sternites covered with very short hairs.

Measurements.—

Total length	3.50–3.80 mm.
Length of head with mandibles	1.72–2.07 mm.
Width of head	.62– .73 mm.
Length of antennae	1.20–1.30 mm.
Width of pronotum	.40 mm.
Length of hind tibia	.52– .60 mm.
Length of left mandible	.95–1.03 mm.

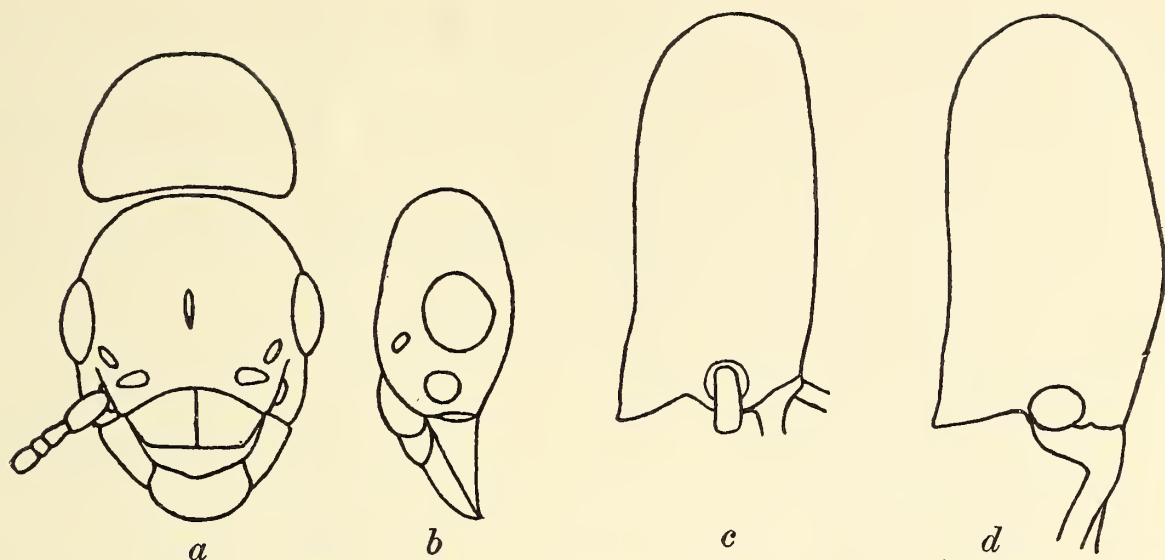


Fig. 85. *Mirotermes (Mirotermes) nigrinus* (Silvestri). *a*, imago, dorsal view of head and pronotum; *b*, imago, lateral view of head; *c*, soldier, lateral view of head.

Mirotermes (Mirotermes) hispaniolae Banks. *d*, soldier, lateral view of head.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Queen.

Morphotype.—Soldier.

The description is based upon two queens, many winged imagos and numerous soldiers collected by the author from six different colonies at Kartabo. The species is named after the peculiar warty appearance of the body of the queen, which is covered with minute slightly pigmented spots.

Subgenus *Mirotermes*, s. str. Holmgren

This subgenus includes thirty species with the new species described in this report. It has the widest distribution of any of the subgenera of *Mirotermes*, s. lat. and is found in all the warmer parts of the world. Eight species are reported from Australia and New Guinea, eight species from Africa and Madagascar, six species from the Oriental region and eight species from the Neotropical region.

Four species were found in British Guiana belonging to this subgenus of which two seem to be new.

Mirotermes (Mirotermes) nigrinus (Silvestri).

Capritermes saltans, subsp. *nigrinus* Silvestri (1901), p. 5 (imago).

Mirotermes saltans, subsp. *nigrinus* Silvestri (1903), p. 68 (imago), *text-fig. 16* (wings), p. 128 (biology).

Termes (Eutermes) saltans, subsp. *nigrinus* Desneux (1904c), p. 45 (synonymy).

Mirotermes (Mirotermes) nigrinus Holmgren (1912), p. 106, *text-fig. 75*, (mandibles of imago).

(Fig. 85 *a*, *b*, *c*)

Imago.—Head dark brown, oval. Fontanelle slit-shaped, rather small.

Antennae with 15 segments, the 2d longer than the 3d, the 2d equal to the 4th.

Eyes of medium size, not prominent, not very close to the lower margin. Ocelli about their width or a little more removed from the eyes; small.

Postclypeus a little lighter than the head, median line present but faint.

Pronotum a little lighter than the head, sides rounded, forming a nearly even curve with the posterior margin.

Posterior margins of the meso- and metanota deeply emarginate, nearly always forming an angle a little more than a right angle.

Wings dark smoky, veins distinct.

Abdominal tergites nearly as dark as the pronotum.

Measurements.—

Length with wings	8.50– 9.00 mm.
Length without wings	5.00– 5.50 mm.
Length of head	1.07– 1.10 mm.
Width of head	.83– .90 mm.
Length of antennae	1.66 mm.
Diameter of eye	.25 mm.
Length of pronotum	.50 mm.
Width of pronotum	.71– .80 mm.
Length of hind tibia	1.13– 1.17 mm.
Length of anterior wing	6.56– 7.26 mm.
Width of anterior wing	1.86– 2.16 mm.
Length of queen	21.00 mm.
Width of abdomen of queen	4.00 mm.

Comparison with other species.—I can find no good difference to separate the imagos of *M. nigritus* and *M. hispaniolae* with the possible exception of the slight differences in measurement.

Soldier.—Head dark yellow, sides straight and parallel, front a little wider than behind, sparsely covered with long bristles.

Antennae with 14 segments, the 2d equal to the 3d, the 4th slightly shorter.

Labrum not as deeply notched as in *M. hispaniolae*.

Nose rather short, not reaching the tip of the labrum, but a little more sharply pointed than in *M. hispaniolae*.

Pronotum pale, anterior margin not emarginate. Legs pale.

Abdominal tergites covered with hairs which are $\frac{1}{3}$ – $\frac{1}{2}$ as long as the marginal bristles. Abdomen the color of the intestinal contents.

Measurements.—

Total length	5.50–6.20 mm.
Length of head to tip of nose	1.35–1.70 mm.
Width of head	.77–1.00 mm.
Length of antennae	2.23 mm.
Width of pronotum	.63 mm.
Length of hind tibia	.83– .87 mm.
Length of left mandible	1.67 mm.

Comparison with other species.—Close to *M. hispaniolae*, but differs by being smaller, nose sharper, and pilosity of the abdomen different.

Remarks.—I am not absolutely sure that my determination of this species is correct. The dentation of the imago mandible seems to agree with Holmgren's (1912, p. 106) figure and the description given by Silvestri agrees fairly well as far as it goes.

Type locality.—Coxipo (Cuyaba), Brazil.

New locality.—Kartabo, British Guiana.

Range.—Paraguay, Brazil, British Guiana.

The description is based upon many winged imagos, kings, queens, and soldiers collected by the author from 10 different colonies at Kartabo.

Mirotermes (Mirotermes) hispaniolae Banks.

Mirotermes hispaniolae Banks (1918), p. 662 (imago).

Mirotermes hispaniolae Banks (1919), p. 481 (soldier), pl. 1, figs. 2, 3 (soldier).

(Fig. 85d)

Imago.—Head dark brown, oval. Fontanelle slit-shaped and rather small. Antennae with the 2d segment a little longer than the 4th but not so thick, the 3d segment shorter than the 4th.

Eyes of medium size, not prominent and not very close to the lower margin of the head. Ocelli small, about their width or a little more removed from the eyes.

Postclypeus a little lighter than the head, median line present but faint.

Pronotum nearly as dark as the head, sides rounded, hind margin with a very slight indication of an emargination, anterior angles rather sharp.

Posterior margin of the mesonotum forming an angle which is much more than a right angle while that of the metanotum is about a right angle or a little more.

Abdominal tergites about the same color as the pronotum.

Measurements.—

Length of head	1.20– 1.27 mm.
Width of head	.96– 1.03 mm.
Diameter of eye	.27 mm.
Length of pronotum	.57 mm.
Width of pronotum	.90– .93 mm.
Length of hind tibia	1.00– 1.03 mm.
Length of queen	13.00 mm.
Width of abdomen of queen	3.00 mm.

Comparison with other species.—Very close to *M. nigrinus*, but slightly larger.

Soldier.—Head dark yellow, sparsely covered with long bristles; sides straight and parallel, hind margin somewhat rounded, head not wider in front than behind.

Antennae with 14 segments, the 3d longer than the 2d, the 2d equal to the 4th.

Labrum deeply notched at the tip, points sharp.

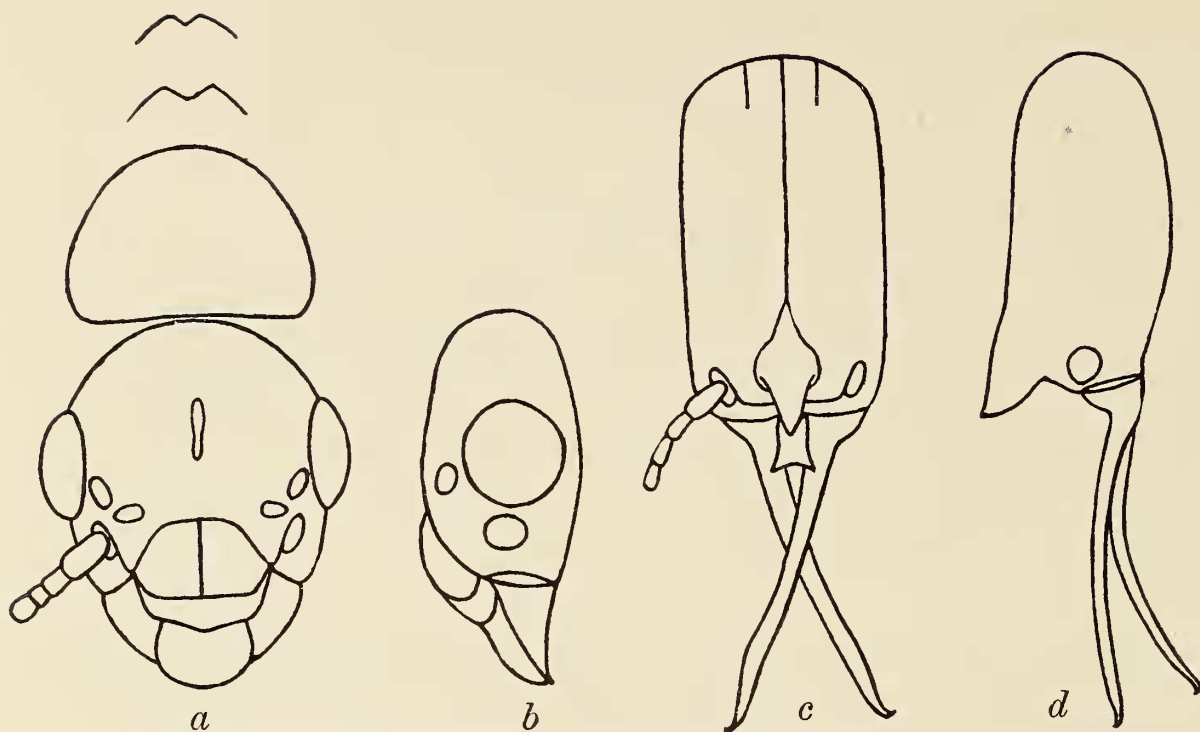


Fig. 86. *Mirotermes (Mirotermes) acutinasus*, sp. nov. a, imago, dorsal view of head, pronotum and margins of thoracic nota; b, imago, lateral view of head; c, soldier, dorsal view of head; d, soldier, lateral view of head.

Mandibles typical type, long and slender.

Nose rather short, not nearly reaching as far as the tip of the labrum, tip usually but not always a little upturned.

Pronotum pale, anterior margin not emarginate. Legs pale.

Abdominal tergites with rather long hair which is only a little shorter than the marginal bristles. Abdomen the color of the intestinal contents.

Measurements.—

Total length.....	6.50–7.00 mm.
Length of head.....	3.80 mm.
Length of head to tip of nose.....	1.54–1.70 mm.
Width of head.....	1.09–1.16 mm.
Length of antennae.....	2.40 mm.
Width of pronotum.....	.73 mm.
Length of hind tibia.....	.97–1.00 mm.
Length of left mandible.....	2.15 mm.

Comparison with other species.—*M. saltans* and *M. nigritus* have a proportionately longer nose, shorter mandibles, and are smaller.

Remarks.—This species seems to coincide with the description given by Banks, and specimens determined by Banks agree, except that the soldier is smaller.

Type locality.—Panama.

New localities.—British Guiana: Kartabo, Georgetown; Trinidad, Port of Spain.

Range.—Haiti, Cuba, Panama, Trinidad, British Guiana.

The description is based upon a single king and queen and numerous soldiers collected by the author from three different colonies at Kartabo. Soldiers collected from a single colony at Georgetown and soldiers collected from a single colony in Trinidad agree with the Kartabo specimens.

***Mirotermes (Mirotermes) acutinasus*, sp. nov.**

(Fig. 86)

Imago.—Head dark brown, oval. Fontanelle slit-shaped, conspicuous.

Antennae with the 3d segment small, the 2d equal to the 4th.

Eyes proportionately large and fairly close to the lower margin. Ocelli decidedly less than their width from the eyes.

Postclypeus lighter than the head, median line faint.

Pronotum lighter than the head, sides and posterior margins rounded.

Posterior margins of the meso- and metanota emarginate.

Abdominal tergites the same color as the pronotum.

Measurements.—

Length of head.....	1.17 mm.
Width of head.....	1.03 mm.
Diameter of eye.....	.36 mm.
Length of pronotum.....	.60 mm.
Width of pronotum.....	.90 mm.
Length of hind tibia.....	1.13 mm.

Comparison with other species.—Quite close to *M. saltans* Silvestri (1903). However, the dentation of the mandibles as figured by Holmgren (1912, p. 106) is quite different, and the eye of *M. saltans* is smaller, measuring only .28 mm. in diameter. Very close to *M. nigrinus*, but the ocelli are conspicuously less than their width from the eyes and *M. acutinasus* is also a little larger than *M. nigrinus*.

Soldier.—Head dark yellow, sparsely covered with bristles; sides straight and parallel; wider in front than behind.

Antennae with 14 segments, the 2d longer than the 3d, the 3d equal to the 4th.

Labrum somewhat notched at the tip. Mandibles typical.

Nose sharp and long, extending well beyond the base of the antennae.

Pronotum pale, not emarginate on the anterior border. Legs pale.

Abdomen the color of the intestinal contents. Tergites covered with hair about $\frac{1}{2}$ the length of the bristles.

Measurements.—

Total length.....	6.00–6.50 mm.
Length of head to tip of nose.....	1.90 mm.
Width of head.....	.97 mm.
Length of antennae.....	2.10 mm.
Width of pronotum.....	.63 mm.

Measurements.—

Length of hind tibia	.93 mm.
Length of left mandible	1.96 mm.

Comparison with other species.—Differs from *M. nigrinus* and *M. hispaniolae* in having a longer, sharper nose which extends much beyond the base of the antennae.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—King.

Morphotype.—Soldier.

The description is based upon one king, two queens, and many soldiers collected from 2 different colonies by the author at Kartabo.

Mirotermes (Mirotermes) inquilinus, sp. nov.

(Fig. 87)

Imago.—Head dark brown, widely egg-shaped, covered with very small hairs, no long bristles present. Fontanelle slit-shaped, about as long or a little longer than the ocelli. 2 inconspicuous muscle insertions in front of the ocelli.

Antennae with 15 segments, the 3d very short, sometimes just separating from the 4th.

Eyes of medium size, prominent, about $\frac{1}{4}$ their diameter from the lower margin. Ocelli small, about $\frac{1}{2}$ their length removed from the eyes.

Postclypeus lighter than the head, long and arched, about as long as $\frac{1}{2}$ its width, median line present.

Pronotum dark brown, sometimes slightly wider than the head, sides straight and depressed, posterior margin rounded.

Posterior margins of the meso- and metanota emarginate.

Wings dark smoky, veins distinct, media usually unbranched.

Abdominal tergites dark brown.

Measurements.—

Length with wings	13.00–14.00 mm.
Length without wings	6.20– 8.50 mm.
Length of head	1.50– 1.70 mm.
Width of head	1.46– 1.60 mm.
Length of antennae	1.70– 2.03 mm.
Diameter of eye	.38 mm.
Length of pronotum	.90 mm.
Width of pronotum	1.54– 1.55 mm.
Length of hind tibia	1.37 mm.
Length of anterior wing	10.16–10.63 mm.
Width of anterior wing	2.58– 2.70 mm.

Comparison with other species.—*M. fur* Silvestri has 17 segments in the antennae. *M. microcerus* Silvestri is a little smaller.

Soldier.—Head yellow, front and nose slightly darker; covered with a few

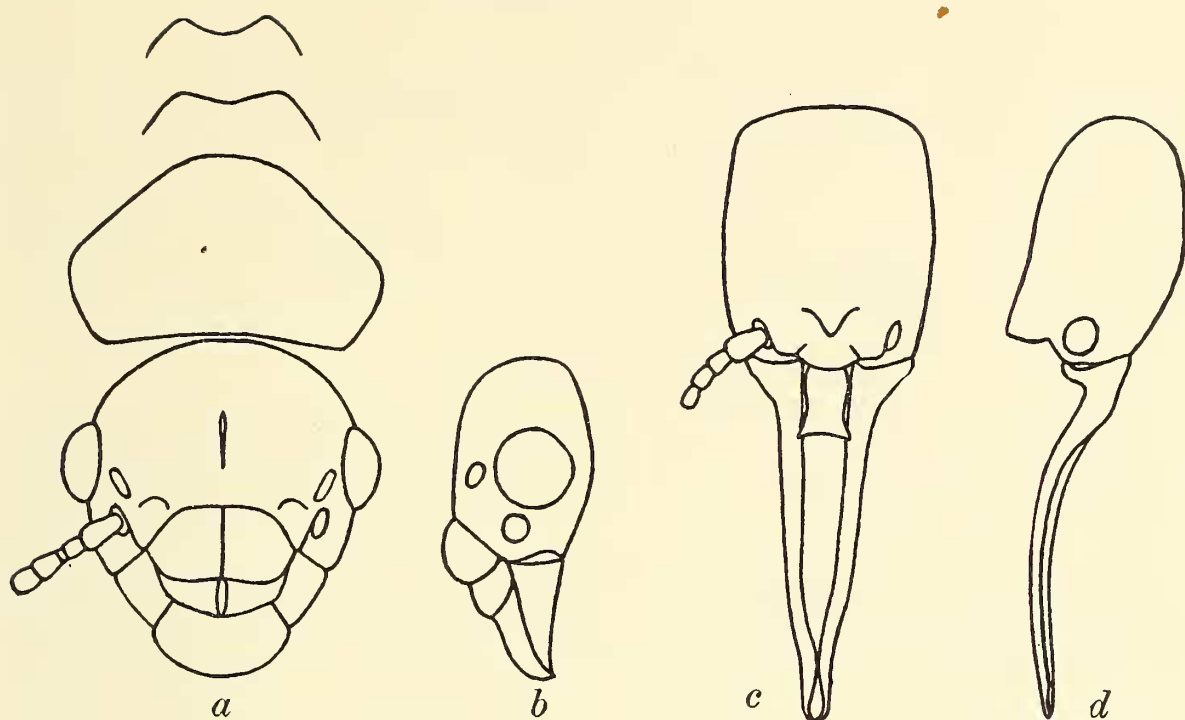


Fig. 87. *Mirotermes (Mirotermes) inquilinus*, sp. nov. a, imago, dorsal view of head, pronotum and margins of thoracic nota; b, imago; lateral view of head; c, soldier, dorsal view of head; d, soldier, lateral view of head.

very small bristles and microscopical hairs; subrectangular, sides and posterior margin slightly curved.

Antennae yellow, with 14 segments.

Mandibles black, much longer than the head.

Nose hairy, profile with pointed end.

Thorax pale. Pronotum with very short hairs and bristles, anterior margin very slightly emarginate. Legs pale.

Abdomen pale, tergites with very short hairs and bristles.

Measurements.—

Total length	7.00–8.00 mm.
Length of head	3.80–4.00 mm.
Length of head without mandibles	2.07–2.10 mm.
Width of head	1.30–1.45 mm.
Length of antennae	2.67 mm.
Width of pronotum	.97 mm.
Length of hind tibia	.95–.97 mm.
Length of left mandible	2.41–2.54 mm.

Comparison with other species.—*M. fur* Silvestri is much larger. *M. microcerus* Silvestri has shorter mandibles.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Winged imago.

Morphotype.—Soldier.

The description is based upon numerous winged imagos, several kings and queens, and many soldiers collected by the author from six different colonies at Kartabo.

This species has a peculiar habit of always living in the nest of *Nasutitermes* (*Constrictitermes*) *cavifrons* (Holmgren). The name of the species was suggested by this habit, the details of which will follow in a later paper.

Subgenus **Cavitermes**, subgen. nov.

The soldier of this remarkable species differs so much in the shape of the head from species belonging to the other subgenera of *Mirotermes* that it seemed to me best to include it in a new subgenus. *Cavitermes* seems to be nearest to *Mirotermes*, s. str. than to any other subgenus but it differs from the typical *Mirotermes*, s. str. in the ridges along the forehead of the soldier and the hollowed front which suggested the name. The mandibles of the soldier are similar in shape and adaptation to those of *Mirotermes*, s. str.

Mirotermes (Cavitermes) tuberosus, sp. nov.

(Fig. 88)

Imago.—Head dark brown, oval, covered with short hairs and a few longer bristles. Fontanelle small and inconspicuous.

Antennae with 15 segments (entire on one of the queens), the 3d very small, the 4th a little shorter than the 2d.

Eyes rather small and not prominent, not very close to the lower margin of the head. Ocelli rather small, long, less than their width from the eyes.

Postclypeus nearly as dark as the head, about as long as $\frac{1}{2}$ its width; median line present but faint.

Pronotum dark brown, proportionately short and wide, sides rounded, converging toward the rear, anterior angles rather sharp, posterior margin very slightly or not emarginate.

Posterior margins of the meso- and metanota widely concave.

Abdominal tergites as dark as the pronotum.

Measurements.—

Length of head	1.23 mm.
Width of head	1.03 mm.
Length of antennae	1.66 mm.
Diameter of eye	.28 mm.
Length of pronotum	.50 mm.
Width of pronotum	.98 mm.
Length of hind tibia	1.23 mm.
Length of queen	8.00 mm.
Width of abdomen of queen	2.00 mm.

Soldier.—Head dark yellow, roughly rectangular from above, widening abruptly, however, at the posterior end, posterior margin rounded; a distinct

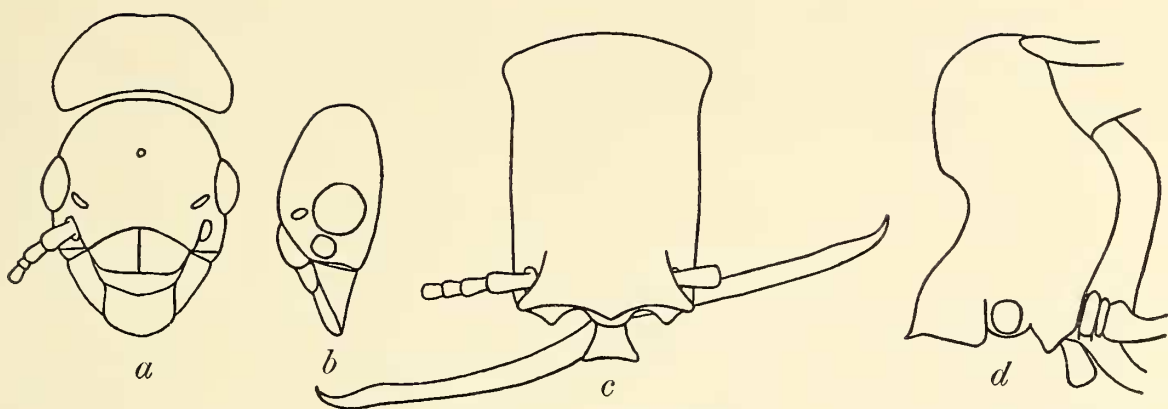


Fig. 88. *Mirotermes (Cavitermes) tuberosus*, sp. nov. a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, soldier, dorsal view of head; d, soldier, lateral view of head.

tubercle on each side of the head on the vertex; profile with a remarkably deep depression in the middle; head prolonged in front into a 3-pointed sharp projection, the tip sharp and upturned in profile; front hollowed out, a distinct projection on each side of the clypeus.

Antennae same color as the head, with 14 segments, the 2d longer than the 3d, the 3d equal to the 4th, the 5th more than two times the length of the 4th.

Labrum 2-pointed, anterior margin slightly concave, sides converging toward the rear.

Mandibles similar to those of *Mirotermes*, s. str., modified for snapping; a short blunt tooth near the base followed by an upturned comparatively long tooth.

Pronotum pale, anterior margin evenly rounded. Legs pale.

Abdomen the color of the intestinal contents, tergites covered with hair.

Measurements.—

Total length.....	5.00–6.00 mm.
Length of head with mandibles.....	3.43 mm.
Length of head to tip of nose.....	1.67–1.77 mm.
Width of head.....	1.10–1.17 mm.
Length of antennae.....	2.20 mm.
Width of pronotum.....	.63–.67 mm.
Length of hind tibia.....	.87 mm.
Length of left mandible.....	1.93 mm.

Type locality.—Barakara (Bartica District), British Guiana.

Other localities.—Cow Island (Bartica District), British Guiana; St. Joseph, Trinidad.

Range.—British Guiana, Trinidad.

Holotype.—Soldier.

Morphotype.—Queen.

The description is based upon one queen and many soldiers collected from a single colony at Barakara, one king and queen and numerous soldiers collected from a single colony at Cow Island, and 2 soldiers collected from a single colony

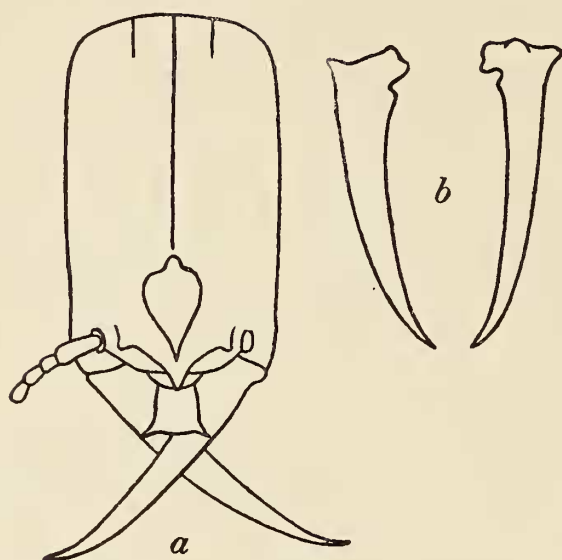


Fig. 89. *Mirotermes* (*Spinitermes*) *trispinosus* (Hagen). *a*, soldier, dorsal view of head; *b*, soldier, mandibles.

in Trinidad by the author. The species is named after the few tubercles on the top of the head and on either side of the clypeus.

Subgenus *Spinitermes* Wasmann

This subgenus includes four species all of which are found only in South America. The single species found in British Guiana I have referred to one of these four species. They are difficult to distinguish apart, however, and my determination may be wrong.

Mirotermes (*Spinitermes*) *trispinosus* (Bates).

- Termes trispinosus* Bates in Hagen (1858), p. 211.
Termes trispinosus Hagen (1858), p. 210 (soldier), pl. 1, fig. 11 (soldier).
Termes trispinosus Hagen (1858a), p. 29 (imago).
Termes (*Spinitermes*) *trispinosus* Wasmann (1897), p. 152.
 (?) *Spinitermes trispinosus* Silvestri (1901), p. 6.
 (?) *Spinitermes trispinosus* Silvestri (1903), p. 71 (soldier, worker), p. 129 (biology), pl. 3, fig. 230 (soldier).
Termes (*Eulermes*) *trispinosus* Desneux (1904c), p. 46 (synonymy).
Mirotermes (*Spinitermes*) *trispinosus* Holmgren (1912), p. 109.

(Fig. 89)

Soldier.—Head yellow, front darker; clothed with a few short bristles; subrectangular, sides straight and parallel, posterior margin rounded.

Antennae with 14 segments, slightly darker than the head.

Labrum slightly darker than the head, wide, 2-pointed.

Mandibles black, slightly curved, smooth except for the teeth at the base.

Nose in some cases turned up at the tip; hairy; with 3 points, the 2 side projections smaller than the middle one.

Thorax pale. Pronotum with the anterior margin rounded. Legs pale.

Abdominal tergites pale, covered with short hair and a few bristles.

Measurements.—

Total length	5.00–7.00 mm.
Length of head	2.75–3.00 mm.

Measurements.—

Length of head without mandibles	1.86–2.12 mm.
Width of head	1.03–1.26 mm.
Length of antennae	1.50–1.90 mm.
Width of pronotum	.68 mm.
Length of hind tibia	.97 mm.
Length of left mandible	1.51 mm.

Comparison with other species.—This species does not seem to correspond to the species described under *Spinitermes trispinosus* by Silvestri (1903). His species has a wider head and the two side projections of the frontal process are proportionately larger. *M. gracilis* Holmgren has a shorter frontal process and the labrum tip is concave without a convex center portion. I am unable to find any good character to separate *M. nigrostomus* Holmgren and *M. trispinosus* in the descriptions of these species and I believe they are the same. Hagen's type soldier in the Museum of Comparative Zoology at Cambridge is very close to the specimens from British Guiana, the head being slightly broader and the mandibles slightly stouter. I believe, however, that they are the same species. A soldier determined by Silvestri of *M. brevicornutus* (Desneux) in the U. S. National Museum, has a broader head than *M. trispinosus* from Kartabo.

Type locality.—Santarem, Brazil.

New locality.—Kartabo, British Guiana.

Range.—Brazil, British Guiana.

The description is based upon many specimens of soldiers collected from five different colonies by the author at Kartabo.

Genus *Capritermes* Wasmann

In the widest sense, this genus is composed of three groups of species which are close enough, however, to keep them in subgenera. They are distributed over all parts of the tropics. *Capritermes*, s. str. includes twenty-three species distributed over Africa, Madagascar, Oriental region, German New Guinea, and Australia. *Pericapritermes* includes four species, all from the African continent. *Neocapritermes* is discussed below.

Subgenus *Neocapritermes* Holmgren

This subgenus includes eight species with the new species described in this report. All of these are found on the South American mainland with the exception of *Capritermes alienus* von Rosen from Africa. Three species were found in British Guiana, one of which was recently described by Silvestri and the others proved to be new.

Capritermes (*Neocapritermes*) *bodkini* Silvestri.

Capritermes Bodkini Silvestri (1923), p. 312 (imago, nymph, soldier, worker), pl. XIII (soldier, nymph).
Capritermes Bodkini var. *modestior* Silvestri (1923), p. 315 (imago, soldier, worker), pl. XIV (imago, soldier, worker).

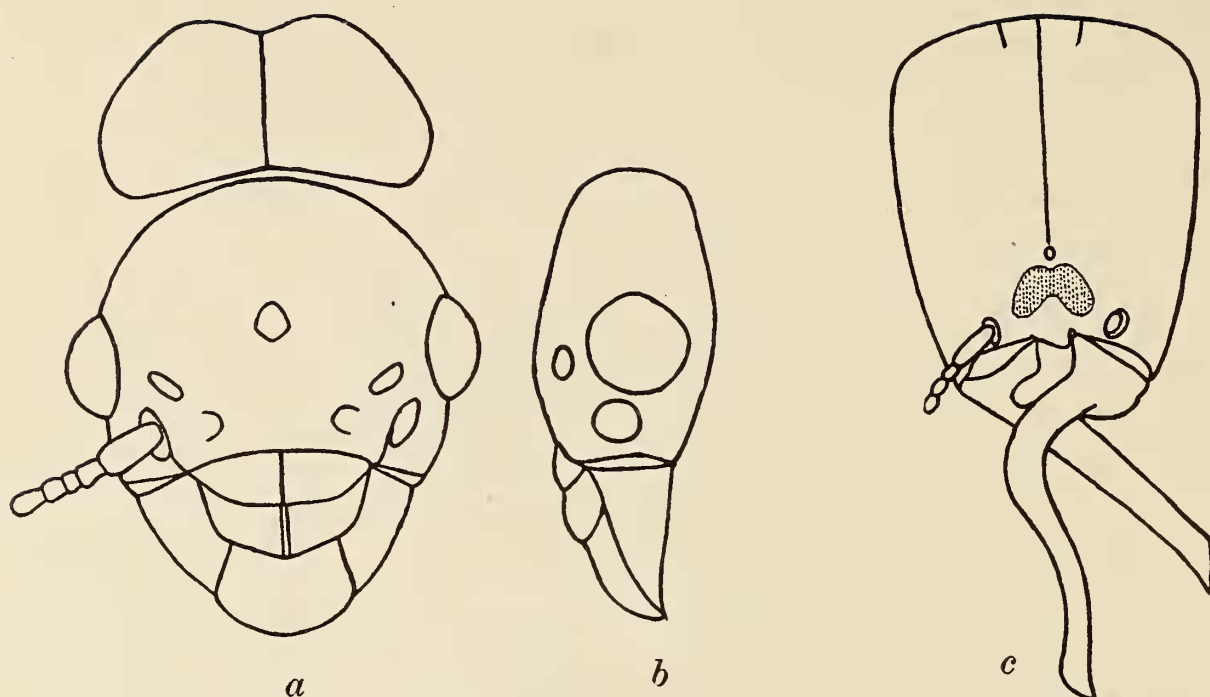


Fig. 90. *Capritermes* (*Neocapritermes*) *bodkini* Silvestri. *a*, imago, dorsal view of head and pronotum; *b*, imago, lateral view of head; *c*, soldier, dorsal view of head.

(Fig. 90)

Imago.—Head rather light brown, widely oval, clothed with a few long bristles. Fontanelle a little darker than the head, large and round. Indistinct muscle insertions in front of the ocelli.

3d segment of the antennae shorter than the 4th, 4th shorter than the 2d, or 3d longer than the 2d, the 2d equal to the 4th.

Eyes of medium size, prominent, about $\frac{1}{4}$ their diameter from the lower margin.

Ocelli of medium size, about their own length from the eyes

Postclypeus about the same color as the head, median line distinct.

Pronotum about the same color as the head, with short hairs and bristles; rather wide, posterior margin deeply emarginate, angles and sides rounded.

Posterior margins of the meso- and metanota widely emarginate or with a rather small notch. Considerable variation is noticeable in this character.

Abdominal tergites rather light brown.

Measurements.—

Length of head.....	2.14–2.36 mm.
Width of head.....	1.93–2.10 mm.
Diameter of eye.....	.52–.53 mm.
Length of pronotum.....	.86–.87 mm.
Width of pronotum.....	1.60–1.75 mm.
Length of hind tibia.....	2.62–2.67 mm.

Comparison with other species.—I am of the opinion that Silvestri's varieties are only variations in size due to the age of the colony from which they were taken, and cannot be considered true varieties. I have what seem to be both

varieties from Kartabo from different colonies, one with a relatively undeveloped king and queen and rather small soldiers, the other colony large with large soldiers, no king and queen being found.

Soldier.—Head yellow, sparsely covered with short bristles. Head widest behind, narrowing toward the front, a distinct line running from the back of the head to the gland opening.

Antennae a little brownish, with 15–16 segments, the 2d, 3d, and 4th segments equal.

Labrum thrust aside to fit the conformation of the mandibles, rounded at the tip. Mandibles asymmetrical, black, left mandible curved more than in *C. angusticeps* and less curved than in *C. planiceps*.

Thorax yellow. Pronotum about $\frac{1}{2}$ the width of the head, anterior margin emarginate. Legs yellow,

Abdomen the color of the intestinal contents. Tergites with a few marginal bristles.

Measurements.—

Total length.....	9.00–12.10 mm.
Length of head with mandibles.....	6.82– 7.26 mm.
Width of head.....	3.70– 3.73 mm.
Length of antennae.....	4.46 mm.
Width of pronotum.....	1.40 mm.
Length of hind tibia.....	2.71 mm.
Length of left mandible.....	3.58 mm.

Type locality.—British Guiana: Tumatumari (Potaro River).

Other localities.—Kartabo, British Guiana.

Range.—Known only from British Guiana.

The description is based upon a single king and queen, many dealated couples (some of which were found with a few diminutive workers and soldiers or eggs), and many soldiers. The soldiers were compared with specimens collected by G. E. Bodkin from Tumatumari and were found to agree.

Capritermes (Neocapritermes) angusticeps, sp. nov.

(Fig. 91)

Imago.—Head brown, widely oval, sparsely clothed with a few long bristles. Fontanelle lighter than the head, much smaller than the ocelli.

Antennae with 17 segments, 3d slightly smaller than the 4th, 4th much smaller than the 2d.

Eye rather large, .10 mm. from the lower margin. Ocelli of medium size, less than their width from the eyes.

Postclypeus lighter than the head, median line rather faint.

Pronotum a little lighter than the head; clothed with short hairs and longer bristles; rather wide; posterior margin somewhat emarginate; angles and sides rounded.

Posterior margin of mesonotum with a right-angled notch. Notch of the posterior margin of the metanotum more than a right angle.

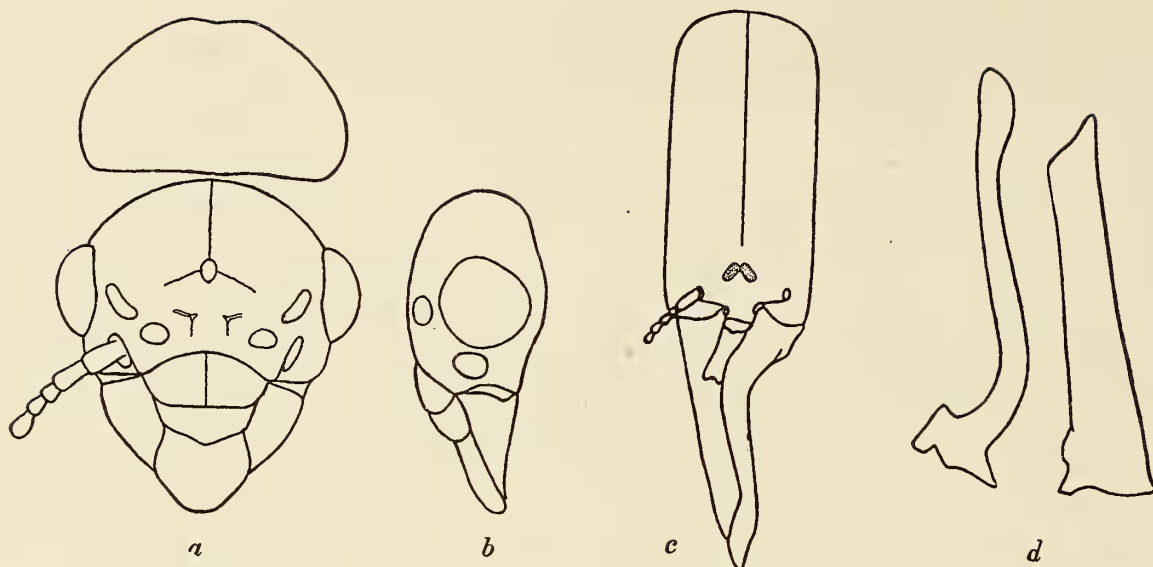


Fig. 91. *Capritermes* (*Neocapritermes*) *angusticeps*, sp. nov. a, imago, dorsal view of head and pronotum; b, imago, lateral view of head; c, soldier, dorsal view of head; d, soldier, mandibles.

Wings dark smoky; a light streak between the media and cubitus. Abdominal tergites the same color as the pronotum.

Measurements.—

Length with wings.....	16.00–17.40 mm.
Length without wings.....	10.00–11.00 mm.
Length of head.....	1.83– 1.93 mm.
Width of head.....	1.60– 1.67 mm.
Length of antennae.....	2.83– 3.07 mm.
Diameter of eye.....	.50– .57 mm.
Length of pronotum.....	.93– .97 mm.
Width of pronotum.....	1.43– 1.53 mm.
Length of hind tibia.....	1.73– 1.75 mm.
Length of anterior wing.....	12.55–13.75 mm.
Width of anterior wing.....	3.24– 3.40 mm.

Soldier.—Head yellow, front slightly darker than the rest, a dark line in the middle extending from the back of the head to the gland opening; sparsely clothed with bristles. Head long and narrow, sides nearly straight, posterior margin slightly rounded.

Antennae slightly darker than the head, with 16 segments.

Labrum thrust aside to fit the mandibles, the tip somewhat concave with 2 conspicuous lobes and a suggestion of a third lobe in the middle.

Mandibles black, asymmetrical, large and powerful.

Pronotum pale, sparsely clothed with bristles; about $\frac{3}{4}$ the width of the head, anterior region forming a large lip and weakly emarginate.

Abdomen pale, sparsely clothed with bristles.

Measurements.—

Total length.....	8.00–12.00 mm.
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Measurements.—

Length of head with mandibles	5.90– 7.00 mm.
Length of head without mandibles	3.86– 4.55 mm.
Width of head	1.46– 1.92 mm.
Length of antennae	3.00– 3.06 mm.
Width of pronotum	1.10– 1.14 mm.
Length of hind tibia	1.39– 1.49 mm.
Length of left mandible	3.00– 3.32 mm.

Comparison with other species.—This is not the species described by Sørensen under *Termes oreensis*, as the labrum is 3-lobed in that species. *Termes oreensis* has been referred to *C. opacus*. *C. angusticeps* does not agree with Hagen's (1858) description of *Termes cingulatus*, now referred to *C. opacus*, in that the pronotum is not conspicuously emarginate in front and the mandibles are not 3.50 mm. long. *Termes lacus sancti* Sørensen, also referred to *C. opacus*, seems to be the same as Hagen's *Termes cingulatus* in both these respects. Both the forms described by Silvestri (1903) as *C. opacus* and *C. opacus parvus* have a 3-lobed labrum. Also *C. villosus* Holmgren has a 3-lobed labrum. *C. talpa* Holmgren seems fairly close, but the head is larger.

Type locality.—Kartabo, British Guiana.

Other localities.—Dunoon, British Guiana.

Range.—Known only from British Guiana.

Holotype.—Soldier.

The description is based upon many soldiers and imagos taken from eight different colonies at Kartabo by the author and several soldiers collected from a single colony at Dunoon by F. M. Gaige.

Capritermes (Neocapritermes) planiceps, sp. nov.

(Fig. 92)

Soldier.—Head pale yellow, the front a little darker; covered with bristles of varying length; head very flat, sides fairly straight, converging slightly toward the front, posterior margin 3-lobed, the middle lobe smaller than those on the sides, which extend back as far as the middle of the prothorax, the middle lobe usually covered by the prothorax.

Antennae yellow, with 14 segments.

Labrum thrust aside to fit the mandibles.

Mandibles extremely asymmetrical, the left strongly curved.

Thorax pale yellow. Pronotum small, about $\frac{1}{3}$ the width of the head, anterior margin emarginate, distinct anterior lip present.

Abdomen pale yellow. Tergites with long and short bristles.

Measurements.—

Total length	4.75–4.90 mm.
Length of head (with mandibles)	2.35–2.53 mm.
Width of head	1.35–1.37 mm.
Length of antennae	1.90–1.92 mm.

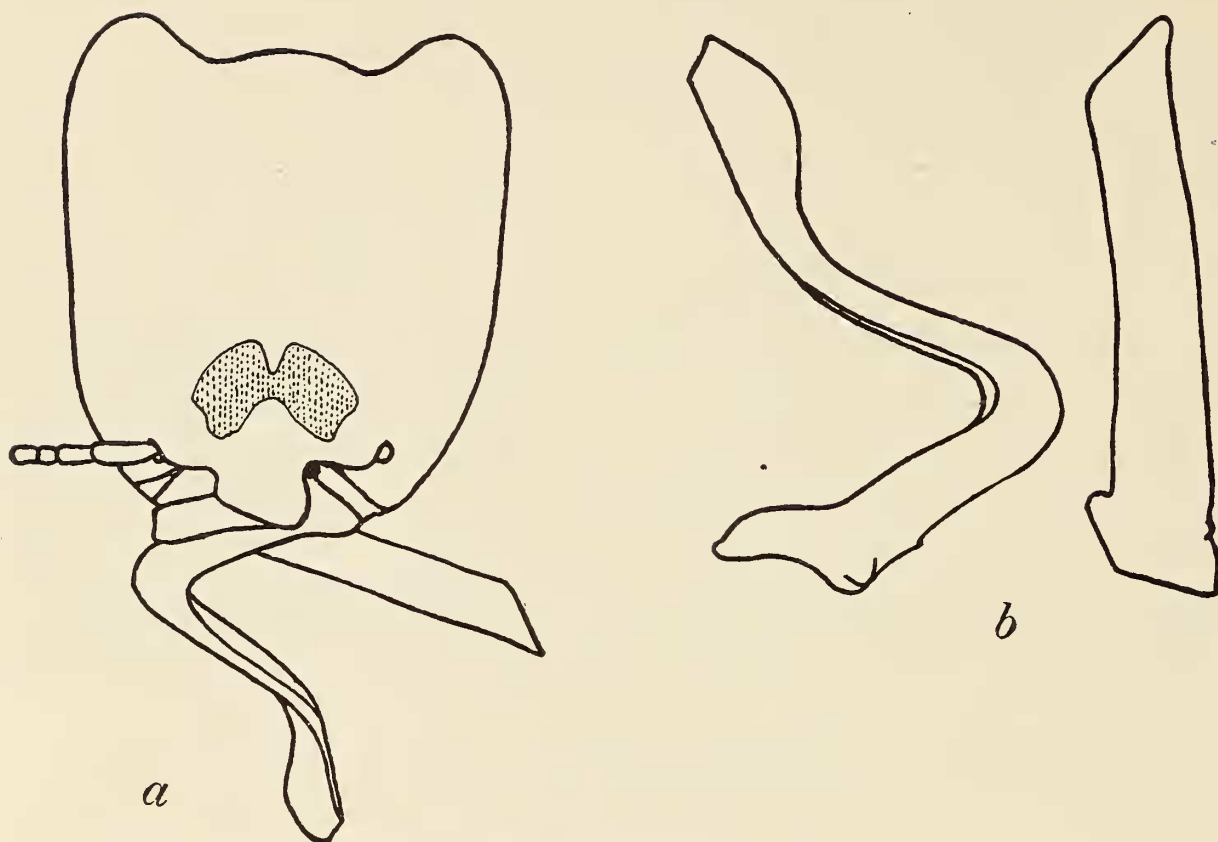


Fig. 92. *Capritermes* (*Neocapritermes*) *planiceps*, sp. nov. *a*, soldier, dorsal view of head; *b*, soldier, mandibles.

Measurements.—

Length of pronotum.....	.30–.36 mm.
Width of pronotum.....	.50–.57 mm.
Length of hind tibia.....	.75–.83 mm.
Length of left mandible.....	1.18–1.23 mm.

Comparison with other species.—Unlike any other species of the genus in the shape of the head, particularly the flatness and the lobed posterior margin.

Worker.—Mandibles with the same dentation as that found in *C. bodkini*.

Type locality.—Kartabo, British Guiana.

Range.—Known only from the type locality.

Holotype.—Soldier.

The description is based upon numerous soldiers collected from three different colonies by the author at Kartabo.

These soldiers are so different from the known representatives of the genus that they may belong to a new subgenus. However, I can find no fundamental character in the soldier to differentiate it from the typical members of the subgenus *Neocapritermes*, so I believe it best to place it in this subgenus, at least for the present. When the imago is found, it may be that characters may be found that will separate this species from the other groups.

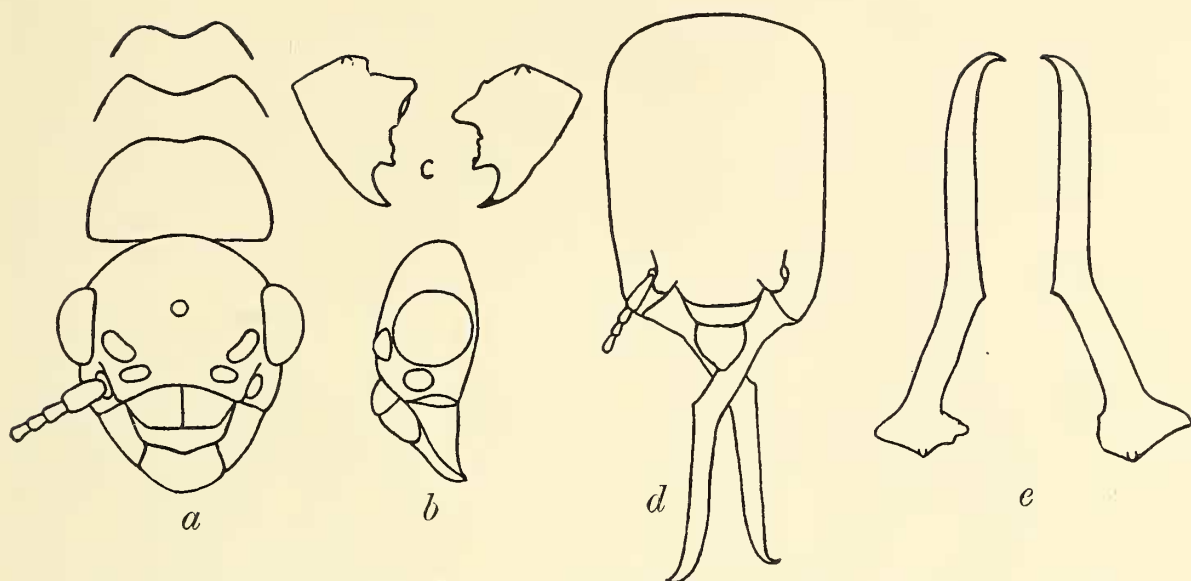


Fig. 93. *Orthognathotermes macrocephalus* (Holmgren). *a*, imago, dorsal view of head, pronotum and margins of thoracal nota; *b*, imago, lateral view of head; *c*, imago, mandibles; *d*, soldier, dorsal view of head; *e*, soldier, mandibles.

Genus *Orthognathotermes* Holmgren

This genus includes only three species, all from the Neotropical region. One other species, *Mirotermes globicephalus* Silvestri (1903), has been doubtfully placed in this genus by Holmgren (1912), but the differences are sufficient to include *M. globicephalus* in a new genus.

Only one species of *Orthognathotermes* was found in British Guiana and that seems to answer the description of *Orthognathotermes macrocephalus* given by Holmgren (1906).

Orthognathotermes macrocephalus (Holmgren).

Mirotermes macrocephalus Holmgren (1906), p. 562 (soldier, worker), text-fig. T (soldier), text-fig. U (worker).
Orthognathotermes macrocephalus Holmgren (1912), p. 119, 118, text-fig. 84 (mandible of nymph), text-fig. 85 (soldier).

(Fig. 93)

Imago.—Head rather dark brown, lighter around the base of the antennae; widely oval; hairy with a few long bristles. Fontanelle round, white, much smaller than the ocelli. 2 large muscle insertions in front of the ocelli but not conspicuous.

Antennae with 17 segments, 2d segment a little longer than the 3d, the 3d equal to the 4th; 1st segment and end segments yellow, middle darker.

Ocelli very large, less than $\frac{1}{4}$ their length removed from the eyes. Eyes very large, very prominent and very close to the lower margin.

Mandibles with the tips sharply pointed, the right with a prominent pointed tooth and a large projection near the base. Labrum yellow.

Postclypeus yellow, contrasting strongly with the head, median line present.

Pronotum brown, lighter than the head, some light marks near the anterior margin and in the middle; hairy with a few long bristles; sides rounded, posterior margin slightly emarginate.

Posterior margins of the meso- and metanota widely concave, angles rather sharp.

Wings smoky; costal border, radius and veins near the scale dark; media and cubitus indistinct near the apex; radius runs parallel to the costal border; media parallel to the cubitus, single or with 2-3 branches; cubitus with 10-11 branches. Tibiae of front legs with 3 apical spines, hind tibiae with 2 apical spines.

Abdominal tergites light brown, hairy with a few long bristles. Sternites pale.

Measurements.—

Length with wings.....	12.00-14.00 mm.
Length without wings.....	7.00- 8.00 mm.
Length of head.....	1.60- 1.75 mm.
Width of head.....	1.40- 1.48 mm.
Length of antennae.....	3.00- 3.17 mm.
Diameter of eye.....	.47 mm.
Length of pronotum.....	.64- .67 mm.
Width of pronotum.....	1.07- 1.17 mm.
Length of anterior wing.....	9.86-10.00 mm.
Width of anterior wing.....	3.17- 3.20 mm.

Soldier.—Head yellow, front brownish; clothed with a few scattered short bristles; head subrectangular, widest behind, posterior margin somewhat rounded; 2 conspicuous raised lobes overhanging the base of the antennae.

Antennae brownish, with 15 segments, the 3d smaller than the 2d or 4th. Labrum weakly 3-lobed.

Mandibles brownish black, long and strong, similar to each other; tips curved, a small tooth about $\frac{2}{5}$ of the length from the base, the mandibles bent at this point; strongly convex from the side.

Thorax pale. Pronotum hairy, raised anterior region large, the front margin emarginate.

Legs pale, 3 apical spines on the front tibiae, 2 on all the other tibiae.

Abdomen pale; tergites hairy.

Measurements.—

Total length.....	8.00-9.00 mm.
Length of head to tip of labrum.....	3.00-3.32 mm.
Length of head with mandibles.....	5.03-5.07 mm.
Width of head.....	1.90-1.92 mm.
Length of antennae.....	2.27-2.57 mm.
Width of pronotum.....	1.07-1.25 mm.
Length of hind tibia.....	1.49-1.57 mm.
Length of left mandible.....	2.36-2.53 mm.

Comparison with other species.—*O. orthognathus* Silvestri has longer mandibles and larger head. The difference between the species is not great, however.

Type locality.—Mojos (Prov. Caupolican), Bolivia.
New locality.—Kartabo, British Guiana.
Range.—Bolivia, British Guiana.

The description is based upon numerous winged imagos and soldiers collected from four colonies at Kartabo by the author.

Genus *Microcerotermes* Silvestri

This genus now includes forty-two species from all the warm parts of the globe. Sixteen species are known from the Ethiopian region, Madagascar and the adjoining islands; ten species are known from the Oriental region; nine species are recorded from the Australian region, including German New Guinea and the Samoan Islands; three species are reported from the Palearctic region; and four species, including the new species described below, are recorded from the New World.

Microcerotermes arboreus, sp. nov.

(Fig. 94)

Imago.—Head very dark blackish brown, covered with rather long hair; oval; muscle insertions not conspicuous. Fontanelle smaller than the ocelli, sometimes rather inconspicuous.

Antennae with 14 segments, the 3d very short, the 4th somewhat shorter than the 2d.

Eyes rather small, fairly prominent, about 1/3 their diameter from the lower margin. Ocelli small, more than their diameter from the eyes.

Postclypeus somewhat lighter than the head with a faint median line; about as long as 1/2 its width.

Pronotum the same color as the postclypeus, slightly lighter than the head; sides fairly straight, posterior margin slightly emarginate; posterior angles rounded.

Posterior margins of the meso- and metanota rather widely emarginate.

Upper part of the tibiae dark. Wings smoky.

Abdominal tergites blackish brown.

Measurements.—

Length with wings	8.03– 9.00 mm.
Length without wings	5.50– 6.50 mm.
Length of head	1.10– 1.20 mm.
Width of head	.90– .97 mm.
Length of antennae	1.38– 1.50 mm.
Diameter of eye	.27 mm.
Length of pronotum	.45– .47 mm.
Width of pronotum	.71– .73 mm.
Length of hind tibia	.96– 1.00 mm.
Length of anterior wing	6.50– 7.43 mm.
Width of anterior wing	1.89– 2.10 mm.
Length of queen	20.00 mm.

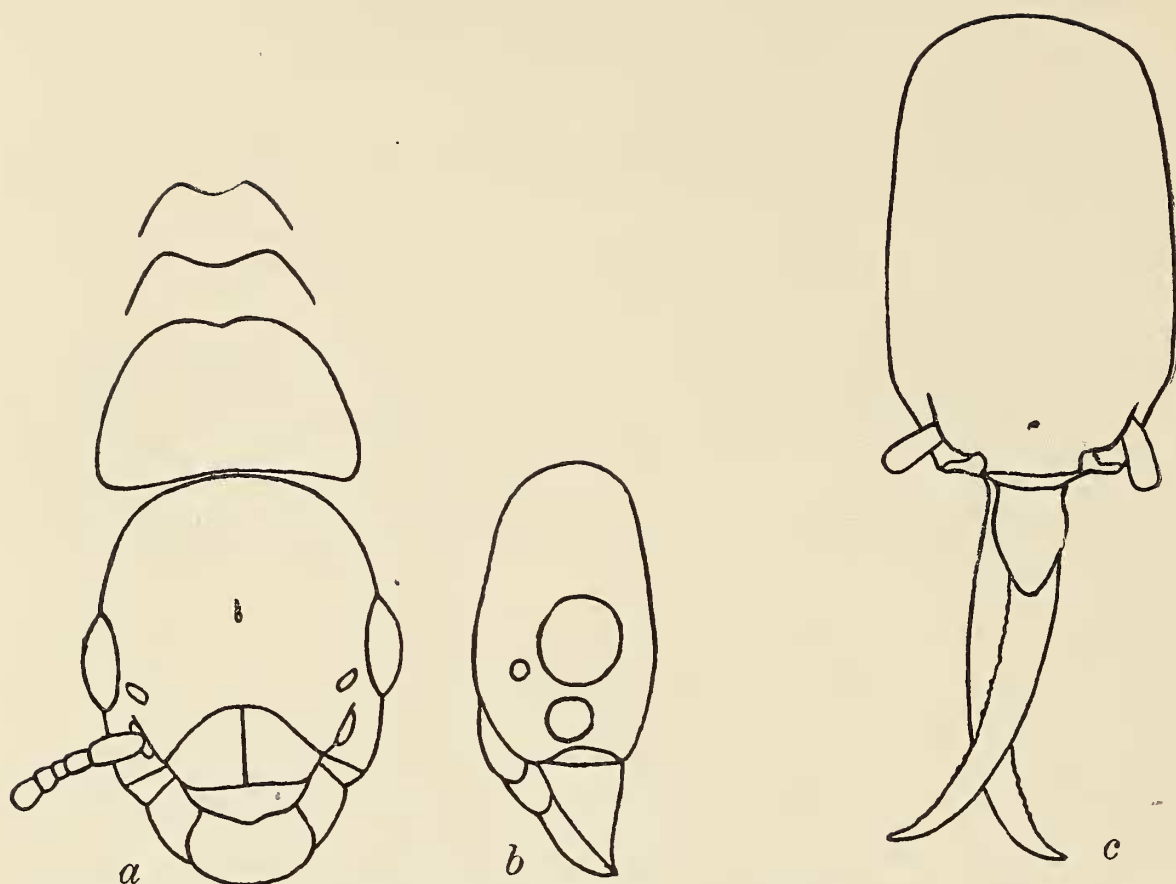


Fig. 94. *Microcerotermes arboreus*, sp. nov. a, imago, dorsal view of head, pronotum and margins of thoracal nota; b, imago, lateral view of head; c, soldier, dorsal view of head.

Comparison with other species.—Seems to differ from *M. bouvieri* Desneux by the longer wings. Hagen's (1858) description of *T. debilis* gives 15 segments in the antennae. This species may be synonymous with Banks' description of *Eutermes debilis*, but Banks has confused two species in his figures, a *Microcerotermes* and a *Leucotermes*. *M. exiguus* Hagen is much smaller. *M. strunckii* (Sörensen) Silvestri is larger in nearly every measurement and the pronotum is conspicuously wider.

Soldier.—Head yellow, sometimes brownish, front darker, a brown spot behind the base of the antennae; clothed with a few bristles and hairs scattered over the head; somewhat oval, widest in back of the antennae, sides fairly straight, converging somewhat toward the rear.

Antennae with 13 segments, the 3d shorter than the 4th, the 4th shorter than the 2d.

Labrum relatively long, tip pointed.

Mandibles dark red brown, scimitar-shaped, the inner edges serrate.

Pronotum with the front margin somewhat emarginate. Legs pale.

Abdomen pale, tergites with short hairs and the posterior margin with a row of short erect bristles.

Measurements.—

Total length.....	4.00–5.00 mm.
Length of head.....	2.67–2.73 mm.
Width of head.....	.93–.97 mm.
Length of antennae.....	1.45–1.50 mm.
Width of pronotum.....	.58–.60 mm.
Length of hind tibia.....	.80–.83 mm.
Length of left mandible.....	1.27 mm.

Comparison with other species.—The figure of *M. strunckii* in Holmgren (1909), p. 88, shows the sides of the head straight.

Type locality.—Kartabo, British Guiana.

Other locality.—Trinidad.

Holotype.—Winged imago.

Morphotype.—Soldier.

The description is based upon several winged imagos and many soldiers, kings, and queens taken from seven different colonies at Kartabo. Several kings, queens and soldiers collected from six different colonies at Trinidad by the author agree with the Kartabo specimens.

BIBLIOGRAPHY

BANKS, N.

- 1901. Thysanura and Termitidae. Papers from the Hopkins Stanford Galapagos Expedition 1898–99. Proc. Wash. Acad. Sci., Vol. 3, pp. 541–546.
- 1906. Two New Termites. Entom. News, Vol. 17, pp. 336–337.
- 1907. A New Species of Termes. Entom. News, Vol. 18, pp. 392–393.
- 1918. The Termites of Panama and British Guiana. Bull. Amer. Mus. Nat. Hist., Vol. 38, pp. 659–667.
- 1919. Antillean Isoptera. Bull. Mus. Comparative Zool., Vol. 62, pp. 475–489.

BANKS, N, AND SNYDER, T. E.

- 1920. A Revision of the Nearctic Termites with Notes on Biology and Geographic Distribution. U. S. National Mus. Bull. 108, pp. 1–228.

BLANCHARD, E.

- 1840. Historie Nat. des Insectes. Paris.

BOLIVAR.

1884. Neurópteros y Ortópteros del Viaje al Pacifico. Madrid, p. 3.

BRUES, C. T.

1923. Termitobracon, a Termitophilous Braconid from British Guiana. *Zoologica*, Vol. 3, No. 22, pp. 427-432.

BUCKLEY, S. B.

1863. Description of Two New Species of Termites from Texas. *Proc. Ent. Soc. Philad.*, Vol. 1, pp. 212-215.

BURMEISTER, H.

1839. *Handbuch der Entomologie*. Vol. 2, Part 1. Berlin.

CHAMBERLIN, R. V.

1923. On Four Termitophilous Millipedes from British Guiana. *Zoologica*, Vol. 3, No. 21, pp. 411-421.

DE GEER, C.

1778. *Memoires pour servir à l'histoire des insects*.

DESNEUX, J.

1904. Notes termitologiques. *Ann. Soc. entom. Belg.* T. 48, pp. 146-151.

- 1904a. A propos de la phylogénie des Termitides. *Ann. Soc. entom. Belg.* T. 48, pp. 278-286.

- 1904b. Trois Termites nouveaux. *Ann. Soc. entom. Belg.* T. 48, pp. 286-289.

- 1904c. Isoptera. *Genera Insectorum*, P. Wytsman. Fasc. 25. Bruxelles.

1905. Varietes termitologiques. *Ann. Soc. entom. Belg.* T. 49, pp. 336-360.

1915. Isoptera. *Collections Zoologiques du Baron Edm. de Selys Longchamps*, Fasc. 3, Part 3, pp. 1-10.

ERICHSON, W. F.

1848. *Insecten in Schomburk's Riesen in British Guiana*. Vol. 3, pp. 553-617. Leipzig.

FABRICIUS, J. C.

1793. *Ent. Syst.*, II.

FOLSOM, J. W.

1923. Termitophilous Apterygota from British Guiana. *Zoologica*, Vol. 3, No. 19, pp. 383-402.

FROGGATT, W. W.

1895. Australian Termitidae. Part I. *Proc. Linn. Soc. New South Wales*, Vol. 10, ser. 2, pp. 415-438.

1896. Australian Termitidae. Part II. *Proc. Linn. Soc. New South Wales*, Vol. 11, ser. 2, pp. 510-552.

1897. Australian Termitidae. Part III. *Proc. Linn. Soc. New South Wales*, Vol. 12, ser. 2, pp. 721-758.

FULLER, CLAUDE.

1921. The Termites of South Africa. *So. Afr. Jl. Nat. Hist.*, Vol. III, no. 1, pp. 14-52.

GAY, C.

1851. *Hist. fis. Polid. Chile*, Vol. 6, p. 87.

HAGEN, H. A.

1853. Bericht d. Königl. Preuss. Akad. d. Wiss. Berlin.
1855. Monographie der Termiten. Part 1. Linn. Ent., Vol. 10.
pp. 1-144, 270-325.
1858. Monographie der Termiten. Part 2. Linn. Ent., Vol. 12, pp.
1-342.
1858a. Catalogue of the Specimens of Neuropterous Insects in the Col-
lection of the British Museum. Part I. Termitina. London.
1860. Monographie der Termiten. Part 3. Linn. Ent., Vol. 14,
pp. 73-99.
1860a. Monographie der Termiten (Nachtrag). Linn. Ent., Vol. 14,
pp. 100-128.
1861. Neuroptera of North America with List of South American
Species. Smithsonian Miscellaneous Collections, Smithsonian
Institute, Washington, pp. 1-7.
1862. Peters naturwissenschaftliche Reise nach Mosambique. V. Neuro-
ptera. Berlin.
1874. Report on the Pseudo-Neuroptera and Neuroptera Collected by
Lieut. W. L. Carpenter in 1873 in Colorado. Ann. Rep. U. S.
Geol. Survey of Territories for 1873, pp. 571-606.

HALDEMAN, S.

1853. Proc. Acad. Nat. Sci. Phila., Vol. 6, p. 365.

HAVILAND, G. D.

1898. Observations on Termites with Descriptions of New Species.
Journ. Linn. Soc., London, Vol. 26, pp. 358-442.

HEER, O.

1849. Insectenfauna der Tertiärgebilde. II., p. 35.

HOLMGREN, NILS.

1906. Studien über südamerikanische Termiten. Zool. Jahrb. Abt.
Syst. Bd. 23, pp. 521-676.
1909. Termitenstudien. 1. Anatomische Untersuchungen. K. Svensk.
Vet.-Akad. Handl. Bd. 44, No. 3.
1910. Versuch einer Monographie der amerikanischen Eutermes-Arten.
Mitteil. aus dem Naturhist. Mus. Hamburg. Bd. 27, pp. 171-
325.
1910a. Das System der Termiten. Zool. Anz. Bd. 35, pp. 284-286.
1910b. Isoptera. The Percy Sladen Trust Expedition to the Indian
Ocean in 1905. Trans. Linn. Soc. London. Bd. 14, No. 8, ser. 2,
Zoology, pp. 135-148.
1911. Termitenstudien. 2. Systematik der Termiten. Die Familien
Mastotermitidae, Protermitidae, and Mesotermitidae. K.
Svensk. Vet.- Akad. Handl. Bd. 46, No. 6, 88 pp.
1911a. Bemerkungen über einige Termiten-Arten. Zool. Anz. Bd. 37,
pp. 545-553.
1912. Termitenstudien. 3. Systematik der Termiten. Die Familie
Metatermitidae. K. Svensk. Vet.-Akad. Handl. Bd. 48, No. 4,
166 pp.

1913. Termitenstudien. 4. Versuch einer systematischen Monographie der Termiten der orientalischen Region. K. Svensk. Vet.-Akad. Handl. Bd. 50, No. 2, 276 pp.
- JHERING, H. V.
1887. Generationswechsel bei Termiten. Ent. Nachr. Vol. 13, pp. 1-4, 179-182.
- KOLLAR, V.
1837. Naturgeschichte der Schädlichen Insekten. Verhandl. Landwirthsch. Gesellschaft in Wien. Vol. 5, new ser., p. 411.
- LATREILLE, P. A.
1805. Histoire naturelle. XIII.
1805a. Nouv. Dictionnaire d'Hist. Nat. XXII, p. 49, 59.
1811-33. In Humboldt, F. H. A. von and Bonpland, A. S. A. Voyage aux Régions Equinoxiales du Nouveau Continent, Faix en 1799-1804. Insectes de L'Amerique Equinoxiale. Recueil d'Observations de Zoologie. Paris. Pt. II., Vol. 2, p. 111, pl. 39, fig. 8 (*Termes marginipenne*).
- LIGHT, S. F.
1921. Notes on Philippine Termites I. Philippine Journ. Sci., Vol. XVIII, No. 3, pp. 243-257.
1921a. Notes on Philippine Termites II. Philippine Journ. Sci., Vol. XIX, No. 1, pp. 23-63.
- LINNAEUS, C.
1757. System. Nat., ed. 10.
- MANN, WM. M.
1923. New Genera and Species of Termitophilous Coleoptera from Northern South America. Zoologica, Vol. 3, No. 17, pp. 323-366.
- MCINDOO, N. E.
1923. Glandular Structure of the Abdominal Appendages of a Termite Guest (*Spirachtha*). Zoologica, Vol. 3, No. 18, pp. 367-381.
- MJÖBERG, E.
1920. Isoptera. Results of Dr. E. Mjöberg's Swedish Scientific Expeditions to Australia 1910-1913. Ark. f. Zool. XII, No. 15, pp. 1-128.
- MORRISON, HAROLD.
1923. On Three Apparently New Species of Termitaphis (Hem.-Het.). Zoologica, Vol. 3, No. 20, pp. 403-408.
- VON MOTSCHULSKY.
1855. Etudes Entomologiques IV, p. 10.
- MÜLLER, FRITZ.
1873. Beiträge zur Kenntniss der Termiten. Jen. Z. Nat. Vol. VII, pp. 333-358, 451-463.
- PERTY, M.
1830. Delectus animalium articulorum Braziliae. Monachiae.
- RAMBUR, P.
1842. Histoire Naturelle des Insects Neuropteres. Paris, pp. 300-309.

RETZIUS, A. I.

1783. Caroli De Geer genera et species insectorum.

VON ROSEN, KURT.

1912. Neue Termiten aus der zoologischen Staatssammlung in München sowie einigen anderen Sammlungen. Zool. Anz. Bd. 39, pp. 221-232.

SILVESTRI, F.

1901. Nota preliminare sui Termitidi sud-americani. Boll. Mus. Zool. Anat. comp. Torino, Vol. 16, 8 pp.
1903. Contribuzione alla conoscenza dei Termiti e Termitofili dell' America meridionale. Redia, Vol. I, pp. 1-234.
1909. Isoptera. Fauna Sudwest-Austral. Bd. 2, pp. 279-314.
1914. Contribuzione alla conoscenza dei Termitidi e Termitofili dell' Africa occidentale. I.—Termitidi. Boll. Lab. Zool. gen. agrar. Portici. Vol. 9, pp. 1-146.
1923. Descriptiones termitum in Anglorum Guiana repertorum. Zoologica, Vol. 3, No. 16, pp. 307-321.

SJÖSTEDT, YNGVE.

1900. Monographie der Termiten Afrikas. Svensk. Vet.-Akad. Handl. Bd. 34, No. 4, 236 pp.
1904. Monographie der Termiten Afrikas. Nachtrag. K. Svensk. Vet.-Akad. Handl. Bd. 38, No. 4, 120 pp.

SNYDER, T. E.

1920. Two New Termites from Arizona. Proc. Ent. Soc. Washington. Vol. 22, p. 38.
1922. New Termites from Hawaii, Central and South America, and the Antilles. Proc. U. S. Nat. Mus., Vol. 61, pp. 1-32.
1923. A New *Glyptotermes* from Porto Rico. Proc. Ent. Soc. Wash., Vol. 25, No. 4, April, 1923.
1923a. Three New Termites from the Canal Zone, Panama. Proc. Ent. Soc. Wash., Vol. 25, No. 5-6, May-June, 1923.

SÖRENSEN, W.

1884. Traek af nogle sydamerikaniske Insecters Biologi. Ent. Tidskr. Vol. 5, pp. 1-25.

WALKER, F.

1853. List of the Specimens of Neuropterous Insects in the Collection of the British Museum. London, pp. 501-529.

WASMANN, E.

1893. Einige neue Termiten aus Ceylön und Madagascar. Wien Ent. Zeit. Bd. 12, pp. 239-247.
1897. Termiten von Madagaskar und Ostafrika. Abh. Senck. ent. nat. Ges. Bd. 21, pp. 137-182.
1902. Termiten, Termitophilen und Myrmecophilen. Gesammelt auf Ceylon von Dr. W. Horn. Zool. Jahrb. Abt. Syst. Bd. 17, pp. 99-164.

WESTWOOD, J. O.

1840. Introduction to the Modern Classification of Insects. Vol. 2, pp. 5-17. London.